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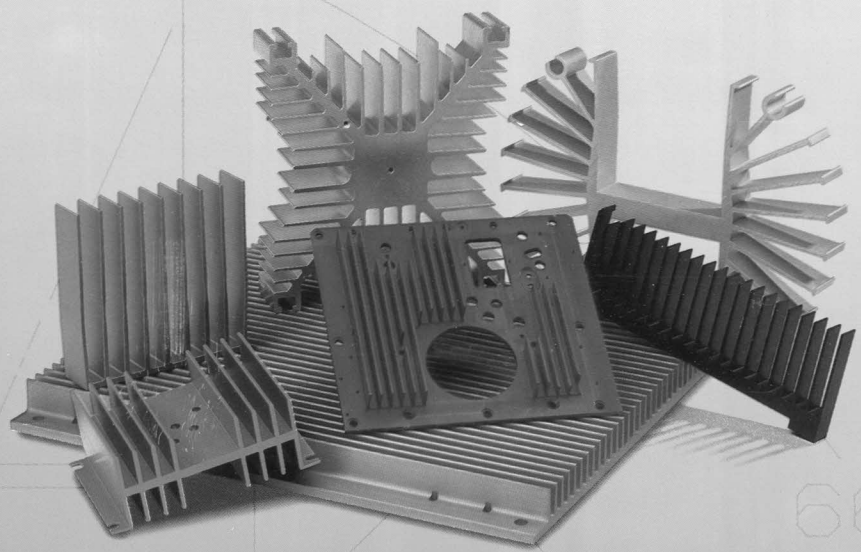
AAVID ENGINEERING, INC.



Aluminum Heat Sink Extrusion Profiles

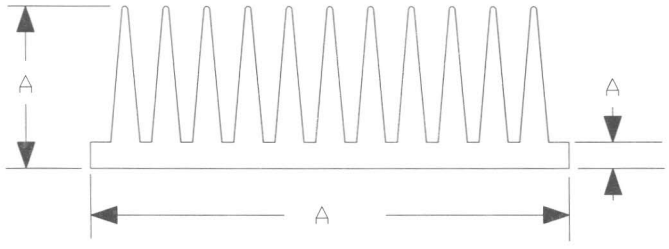
Thermal Management Solutions

AAVID™

DIMENSIONAL TOLERANCES FOR ALUMINUM EXTRUSIONS

Aavid Engineering's aluminum extrusions comply with the standard commercial tolerances established by The Aluminum Association, Inc. The tolerance for an extrusion dimension is a function of the size of the particular dimension and the diameter of the extrusion die. The following table is a guide for most dimensional tolerances. The illustration shown is a typical flat back extrusion. Tolerances for extreme ratios and some of the larger sizes tend to exceed the tolerances listed on this table and, conversely, some of the smaller (less than 7 inch diagonal) extrusions can be supplied with half of the commercial tolerances.

Complex and larger shapes will usually have specific tolerances quoted which are dependent upon the exact shape and configuration.



TYPICAL PROPERTIES OF 6063-T5 ALUMINUM EXTRUSION ALLOY

Dimension A (inches)	+/- Tolerance on "A" Diameter of Extrusion Die Up to 10 inches	Greater than 10"
< .125	.006	.014
.125 - .249	.007	.015
.250 - .499	.008	.016
.500 - .749	.009	.017
.750 - .999	.010	.018
1.000 - 1.499	.012	.019
1.500 - 1.999	.014	.024
2.000 - 3.999	.024	.034
4.000 - 5.999	.034	.044
6.000 - 7.999	.044	.054
8.000 - 9.999	.054	.064
10.000 - 11.999	——	.074
12.000 - 13.999	——	.084
14.000 - 15.999	——	.094
16.000 - 17.999	——	.104
18.000 - 19.999	——	.114

Flatness and surface roughness tolerances of extrude surfaces are also useful for heat sink applications. Th following table lists typical ranges.

Aluminum Surface	Flatness in/in	Surface Roughnes (RMS)
As Extruded	.004 (up to .006)	125 - 64
Timesaver Sanding (except for edge rounding)	.002/.003	64 - 32
Flycut	.001	64 - or better

TYPICAL PROPERTIES OF 6063-T5 ALUMINUM EXTRUSION ALLOY

Physical Property	Unit of Measure	Value
Average Coefficient of Thermal Expansion	10^{-6} in/°F (68°-212°F)	13.0
Approximate Melting Range	°F	1140- 1210
Thermal Conductivity	BTU-in/ft^2 hr°F (@ 77°F)	1450
Electrical Resistivity	Microhm-cm (@ 68°F)	2.8

Mechanical Property	Unit of Measure	Value
Ultimate Strength	psi	27,000
Yield Strength	psi	21,000
Elongation (% in 2 in., 1/16" thick speciman)	%	12
Hardness Brinell No.	(500 kg load, 10 mm ball)	60
Ultimate Shear Strength	psi	17,000
Fatigue Endurance Limit (500 x 10^6 cycles Moore Mach.)	psi	10,000
Modulus of Elasticity	10^6 psi	10

Source: Aluminum Standards and Data, 1988, Aluminum Association Inc.

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INTRODUCTION

This catalog includes the most extensive selection of heat sink extrusion profiles available from a single source of supply. Aavid Engineering, Inc. is the world's leader with over 3000 heat sink extrusion profiles designed and tooled over the past 30 years for the efficient cooling of all types of heat generating devices. This catalog gives detailed dimensions and performance data for over 1300 of the most popular profiles. Over 400 new profiles are being added annually for new applications where an existing profile does not meet customer design criteria.

Aavid's engineering department is well equipped to assist with the selection of existing heat sink profiles and the design of new profiles (see pages 3-5). Should you require a new extrusion design, Aavid will produce the die in house, thereby minimizing delays and insuring strict quality control. Since there is only a nominal engineering service charge for the design and tooling of new extrusion dies, in many instances a new design is selected rather than choosing an existing profile.

Figure 1 shows a portion of the extrusion inventory stocked in Aavid's warehouse. Over 10,000 square feet of Aavid's 210,000 square foot plant is devoted to the extrusion warehouse. An extrusion inventory of over 1,000,000 pounds is maintained at all times to expeditiously meet customers requirements.

In addition to the availability of heat sink extrusion profiles, Aavid has established a world-class reputation for thermal management solutions. Hundreds of standard heat sinks are available for PCB's, Pin Grid Array packages, Leadless Chip Carrier sockets, DIP's, SIP's and multiwatt packages. High power cooling products include bonded-fin heat sinks, folded fin heat sinks, epoxy isolation systems, liquid-cooled cold plates and heat pipe assemblies.

Figure 2 illustrates a recently installed high speed saw that has the capability to hold cut tolerances of +/-.002" on length dimensions, squareness of .005", a surface finish of 32 microinches or better, and a virtual burr-free cut.

FIGURE 1

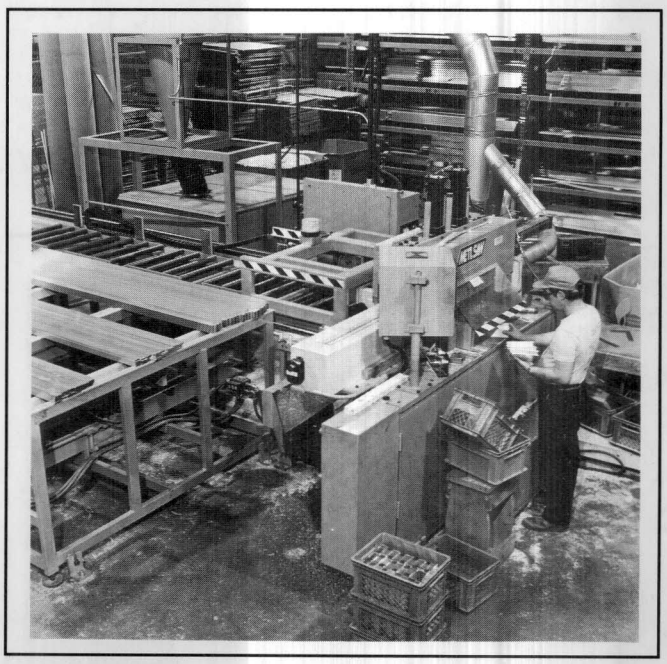

FIGURE 2

FABRICATION CAPABILITIES

If complete fabrication of an extruded profile heat sink is desired, Aavid is equipped for virtually any secondary operation from routine cut, deburr and wash to complex milling, stamping and finishing.

Typical secondary operations are:

Broaching
Chamfering
Counterboring
Cutting (Sawing)
Deburring (Automated)
Drilling (CNC)
Electro Discharge Machining (EDM)
Epoxy Bonding
Epoxy Isolation
Fly Cutting
Milling (CNC)
Punching
Reaming
Sanding
Slotting
Stamping (High Speed)
Tapping
Tumbling
Vacuum Brazing

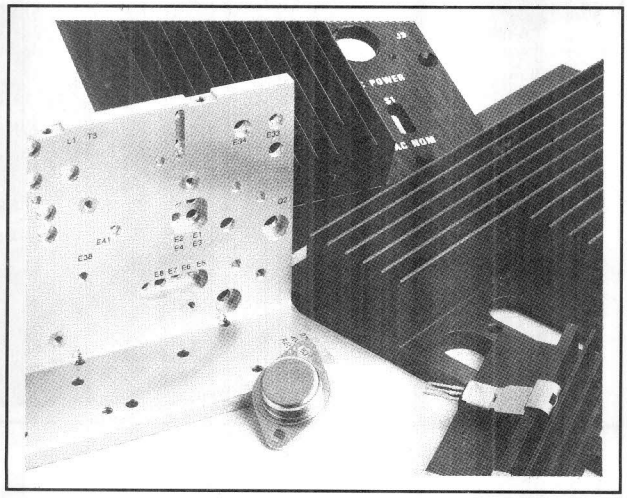

FIGURE 3

Figure 3 shows a number of fabricated extruded heat sinks that incorporate a number of secondary operations and finishing options.

Finishing options include:

Anodizing (Regular and Hard)
Caustic Etching
Chromating
Irriditing
Painting
Silk Screening
Washing
Degreasing

Aavid's quality control systems meets Mil-I-45208 and a SPC system is utilized.

Figure 4 shows a portion of Aavid's $1 million automated anodizing line which completely eliminates manual operations.

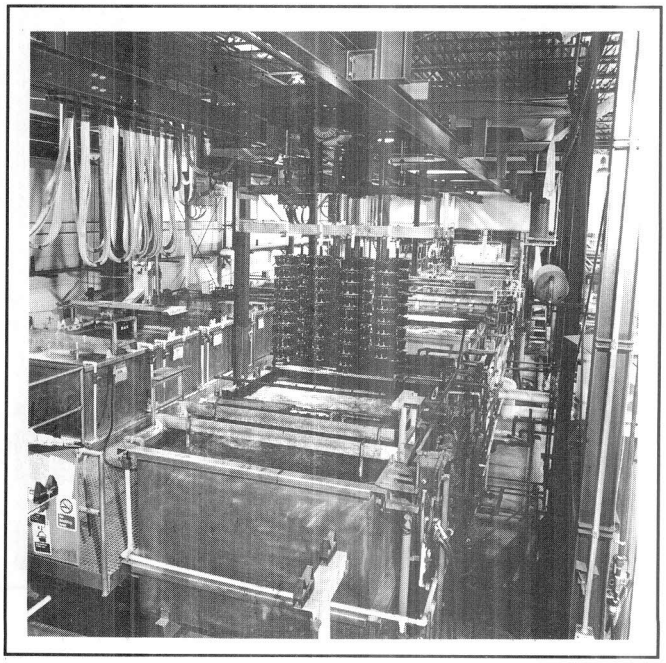

FIGURE 4

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DESIGNING AN EXTRUDED HEAT SINK

For optimum thermal performance a heat sink should dissipate as much heat as possible within a given volume. The use of fins increases the surface area and improves heat transfer. In order to find the best fin array (extrusion profile), a knowledge of convective heat transfer applied to heat sinks is necessary.

FORCED CONVECTION

Forced convection follows Newton's Law of Cooling, which relates thermal resistance to a heat transfer coefficient and surface area. The heat transfer coefficient is characterized by the fluid properties and flow rate. In heat sink applications, the goal is to minimize the thermal resistance. Therefore, the two design factors that effect heat transfer from a heat sink are surface area and fluid flow rate.

For typical extruded heat sink applications, the overall volume of the heat sink is normally determined by the application. For a given volume, when the surface area of a heat sink increases at a constant air flow, the heat transfer capability increases. However, the static pressure drop across the heat sink also increases as the surface area increases. Since the air flow from any external air mover (fans, blowers, impellers, etc.) is effected by static pressure resistance, the airflow is reduced.

Forced convection optimization utilizes the specific relationship between the heat sink geometry and the air mover capabilities. **Figure 5** shows this relationship.

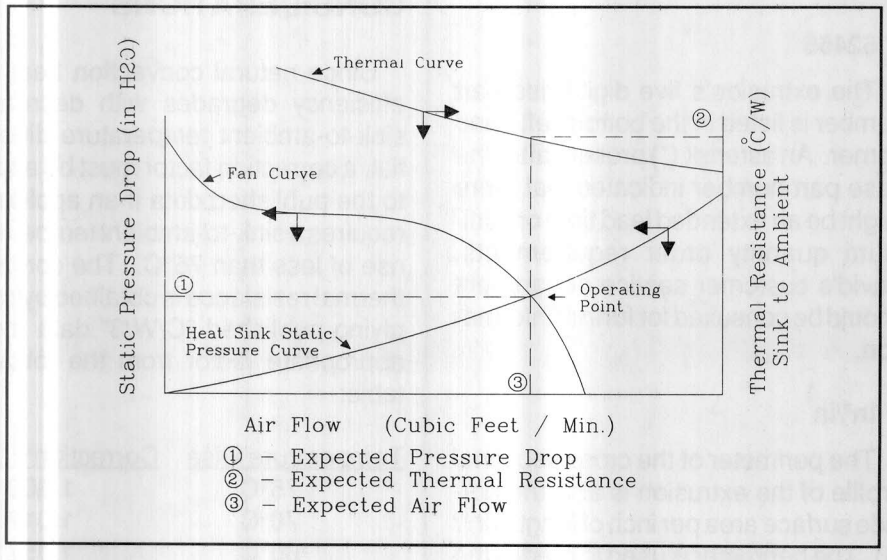


FIGURE 5 Forced Convection Optimization

An operating point can be found by superimposing on the same axis: (1) a thermal performance curve of a heat sink and (2) pressure profiles of both the heat sink and the air mover, all expressed as a function of airflow. The intersection of the two pressure curves is the operating (or equilibrium) point. Different operating points can be determined for different heat sink geometries and air movers.

NATURAL CONVECTION

The phenomenon of free fluid flow over a surface is controlled primarily by the buoyancy of the fluid. For natural air convection, much research has been performed to determine specific heat transfer coefficients, associated with various configurations of heat sinks. One of the most effective heat sink configurations is the vertical channel. A vertical channel is formed using an extruded heat sink with the extruded fins formed in a vertical direction (See **Figure 6**). For most natural convection heat sink applications, it is the best orientation for maximum cooling. Any deviation from a vertical orientation will reduce thermal performance.

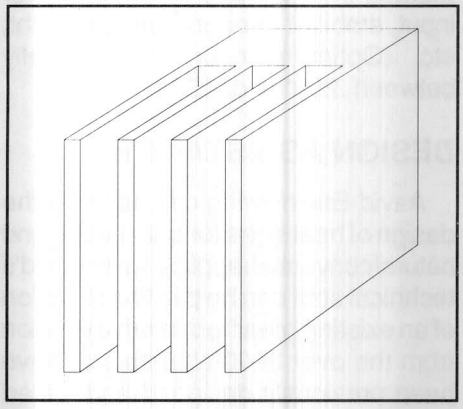


FIGURE 6 Vertical Channel Heat Sink

Natural convection is also dependent upon Newton's Law of Cooling. The heat transfer coefficient in this case is dependent primarily upon the orientation of the heat sink. With the best orientation possible, only an increase in surface area can increase heat transfer for natural convection.

When surface area is increased in a given volume, the number of fins increases. However, this decrease in fin spacing impedes the air flow through the channel and increases the thermal resistance. **Figure 7** illustrates that as the inside fin spacing decreases, a minimum temperature rise occurs.

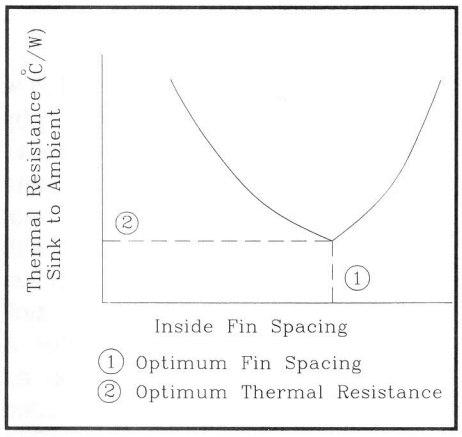


FIGURE 7 Natural Convection Optimization

The optimum point occurs with the most favorable inside fin spacing. The spacing is a function of the specific thermal environment, such as power input, ambient temperature, fin height, etc. (Optimum fin spacing is usually between .250" and .450")

DESIGN ASSISTANCE

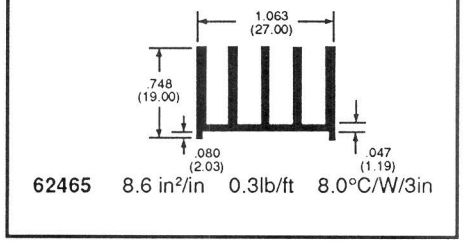
Aavid Engineering can assist in the design of heat sinks for both forced and natural convection applications. Aavid's technical staff can help in the selection of an existing "near" optimum extrusion from the over 3000 shapes that have been previously designed and tooled by Aavid Engineering or can design a new extrusion which best meets the requirements of the application.

Any thermal application, needing an extruded heat sink, should be thermally defined as explicitly as possible before an extrusion is selected or designed. The **Request for Information** Sheets on pages 64 and 65 outline the design parameters that need to be answered to achieve optimization.

Our customers are reminded that they bear the responsibility for testing Aavid products for proposed uses. Any information furnished by Aavid is believed to be accurate and reliable, but our customers must bear all responsibility for use and application of Aavid products since Aavid cannot be aware of all potential uses.

HOW TO USE PUBLISHED DATA FOR EXTRUSION PROFILES

Each extrusion profile is described in a separate box along with its part number, dimensions, surface area (in²/in), weight per foot of extrusion (lb/ft), and natural convection thermal resistance for a three inch length of extrusion (°C/W/3").



62465

The extrusion's five digit base part number is listed in the bottom left hand corner. An asterisk (*) present after the base part number indicates that there might be an extended lead time or minimum quantity order requirements. Aavid's customer service department should be consulted for further information.

in²/in

The perimeter of the cross sectional profile of the extrusion is also the outside surface area per inch of length (in²/in). The perimeter is used to predict the thermal resistance in forced convection applications. The **Forced Convection Table on page 5** provides the thermal resistance of an extrusion using three variables: air velocity, extrusion length, and perimeter.

lb/ft

The weight of the extrusion in pounc per foot (lb/ft) is used as a relativ indicator of extrusion cost when co sidering different extrusions for a pa ticular application. This figure ma also be used to calculate the cros sectional surface area (in²) of an e trusion.

Area(cross-section) = (lb/ft)/1.164

°C/W/3"

The theoretical therm resistance(°C/W) for a three inch se tion of extrusion in natural convection a calculated figure derived from su face area per inch of length (in²/in), sink-to-ambient temperature differenc of 75°C, a black anodized finish, and single point heat source mounted at th center of the three inch section (th length axis of the extrusion is assume to be vertical).

TEMPERATURE CORRECTION CONSIDERATIONS

Since natural convection heat sir efficiency degrades with decreasir sink-to-ambient temperature differe tial, a correction factor must be applie to the published data if an applicatic requires a sink-to-ambient temperatu rise of less than 75°C. The correcte thermal resistance is obtained by mul plying published °C/W/3" data by th appropriate factor from the followir table:

Temperature Rise	Correction Fact
75°C	1.000
70°C	1.017
60°C	1.057
50°C	1.106
40°C	1.170
30°C	1.257

For any extrusion profile in natur convection, the thermal resistance (° W) is more than 25% higher at T_{SA} = 30° than at T_{SA} = 75°C.

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ENGTH CORRECTION ONSIDERATIONS

The published extrusion data shows ıtural convection performance for a ree inch section with a centrally lo-ıted point source heat load. Because e heat load is assumed to be at a point ther than uniformily distributed, ther-al resistance does not change line-ly with length. (The ends of a very ng extrusion would be cooler than the ːnter and therefore the transfer of ːat to the surrounding air is little, if ıy.) It is therefore necessary to apply correction factor to published data for ːtrusion lengths shorter or longer than ree inches. The corrected thermal sistance for different lengths of extru-ɔn is obtained by mulitplying pub-ːhed °C/W/3" data by the appropriate ctor from the following table:

Length of Heat Sink	Correction Factor
1.0"	1.80
2.0"	1.25
3.0"	1.00
4.0"	0.87
5.0"	0.78
6.0"	0.73
7.0"	0.67
8.0"	0.64
9.0"	0.60
10.0"	0.58
11.0"	0.56
12.0"	0.54
13.0"	0.52
14.0"	0.51
15.0"	0.50

This table may also be used to determine the appropriate length of a preferred extrusion required to obtain a desired thermal resistance. Merely divide the desired thermal resistance by the published thermal resistance for a three inch section to obtain a correction factor.

EXAMPLE: Extrusion 62465 has a thermal resistance of 8.0 °C/W/3 inch. A five inch piece will have a thermal resistance of 6.24°C/W, using the appropriate thermal resistance ratio of 0.78 [8.0°C/W x 0.78 = 6.24°C/W].

Since the thermal resistance of 6.24°C/W is at a temperature rise of 75°C, the resistance of the heat sink at a temperature rise of 50°C will be increased by the temperature correction factor of 1.106. Therefore the new thermal resistance is now 6.90°C/W [6.24°C/W x 1.106 = 6.90°C/W].

EXTRUSION FORCED CONVECTION THERMAL RESISTANCE TABLE

Inlet air at 25 deg C

Air Velocity LFM (ft/min)	100	200	300	400	500	600	700	800	900	1000	1100	1200
Length of Extrusion (inches)												
0.25	183.33	129.63	105.84	91.66	81.98	74.84	69.29	64.81	61.11	57.97	55.27	52.92
0.50	129.63	91.66	74.84	64.81	57.97	52.92	48.99	45.83	43.21	40.99	39.08	37.42
1.00	91.61	64.77	52.89	45.80	40.96	37.40	34.62	32.38	30.53	28.97	27.62	26.44
2.00	64.89	45.88	37.46	32.44	29.02	26.49	24.52	22.94	21.63	20.52	19.56	18.73
3.00	52.88	37.39	30.53	26.44	23.64	21.58	19.98	18.69	17.62	16.72	15.94	15.26
4.00	45.81	32.39	26.45	22.90	20.49	18.70	17.31	16.19	15.27	14.48	13.81	13.22
5.00	40.99	28.98	23.66	20.49	18.33	16.73	15.49	14.49	13.66	12.96	12.36	11.83
6.00	37.39	26.44	21.58	18.69	16.72	15.26	14.13	13.22	12.46	11.82	11.27	10.79
7.00	34.61	24.47	19.98	17.30	15.48	14.13	13.08	12.23	11.53	10.94	10.43	9.99
8.00	32.39	22.90	18.70	16.19	14.48	13.22	12.24	11.45	10.79	10.24	9.76	9.35
9.00	30.53	21.58	17.62	15.26	13.65	12.46	11.53	10.79	10.17	9.65	9.20	8.81
10.00	28.97	20.48	16.72	14.48	12.95	11.82	10.94	10.24	9.65	9.16	8.73	8.36
11.00	27.62	19.53	15.95	13.81	12.35	11.27	10.44	9.76	9.20	8.73	8.32	7.97
12.00	26.44	18.69	15.26	13.22	11.82	10.79	9.99	9.34	8.81	8.36	7.97	7.63
13.00	25.40	17.96	14.66	12.70	11.36	10.37	9.60	8.98	8.46	8.03	7.66	7.33
14.00	24.48	17.31	14.13	12.24	10.95	9.99	9.25	8.65	8.16	7.74	7.38	7.06

Use this chart to determine the Thermal Resistance (°C/W) of extruded ːat sink profiles at various air velocities and extrusion lengths.

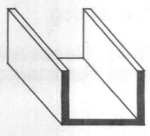
For selected extrusion length and air velocity, find the corresponding ːrformance Factor (°C/W per perimeter inch) from the above chart at the ːtersection of the Velocity Column and the Length Row.

The Thermal Resistance (°C/W) for a particular extrusion profile is ɔtained by dividing the appropriate Performance Factor by the profile perimeter (in²/in) exposed to the forced air flow. The profile perimeter (in²/in) is listed under each profile in the extrusion section of this catalog.

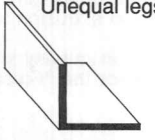
This design aid is also available as an easy to use Slide Rule. Please ask our customer service department for the "Forced Air Thermal Resistance Calculator".

INDEX

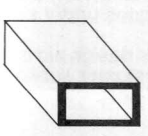
STANDARD EXTRUSIONS


Channels

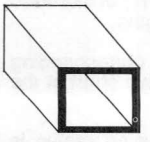
Pages 8 & 9


Angles
Equal legs/
Unequal legs

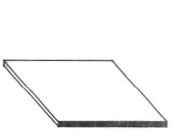
Pages 10 & 11


Tubes
Rectangle

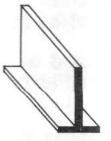
Page 12


Tubes
Square

Page 12


Flat Bars

Page 13


Tees

Page 13

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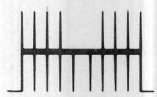
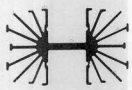
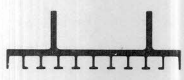
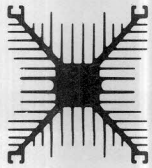
INDEX

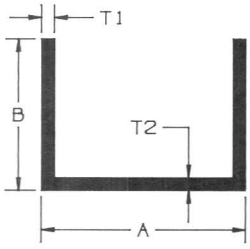








CHANNELS



Part #	A	B	T1	T2	lb./ft.
80137	0.438	0.500	0.063	0.063	0.09
80358	0.500	0.500	0.063	0.063	0.10
80662	0.500	0.500	0.094	0.094	0.15
84156	0.500	0.500	0.125	0.125	0.18
80423	0.500	0.750	0.063	0.063	0.14
82313	0.500	0.750	0.125	0.125	0.25
82577	0.547	0.625	0.125	0.125	0.21
82387	0.563	0.250	0.055	0.055	0.05
82578	0.563	0.625	0.125	0.125	0.23
86668	0.600	0.460	0.065	0.100	0.12
80530	0.625	0.500	0.125	0.125	0.20
80439	0.625	0.625	0.063	0.063	0.14
80477	0.625	0.625	0.125	0.125	0.25
81373	0.625	1.000	0.125	0.125	0.35
80531	0.750	0.500	0.125	0.125	0.23
80906	0.750	0.625	0.063	0.063	0.14
80916	0.750	0.750	0.055	0.055	0.16
80478	0.750	0.750	0.125	0.125	0.30
81543	0.875	1.000	0.125	0.125	0.38
80508	1.000	0.500	0.125	0.125	0.26
82233	1.000	0.625	0.125	0.125	0.29
82727	1.000	0.750	0.094	0.094	0.25
82053	1.000	0.750	0.125	0.125	0.31
80446	1.000	1.000	0.125	0.125	0.41
84489	1.188	0.563	0.062	0.187	0.33
80507	1.250	0.375	0.125	0.125	0.25
80340	1.250	0.500	0.125	0.125	0.29
81121	1.250	0.625	0.125	0.125	0.34
84016	1.250	1.250	0.075	0.125	0.38
80663	1.250	1.250	0.125	0.125	0.53
83370	1.250	1.250	0.250	0.250	0.95
80924	1.375	0.750	0.063	0.063	0.20
80505	1.375	0.875	0.125	0.125	0.42
80504	1.500	0.375	0.125	0.125	0.29
80445	1.500	0.500	0.125	0.125	0.31
81122	1.500	0.625	0.125	0.125	0.37
85311	1.500	0.656	0.125	0.125	0.38
82054	1.500	0.750	0.125	0.125	0.41
80747	1.500	1	0.125	0.125	0.48
83262	1.500	1.250	0.125	0.125	0.53
80563	1.500	1.500	0.125	0.125	0.63
80345	1.500	1.500	0.250	0.250	1.18
80501	1.750	0.500	0.125	0.125	0.36

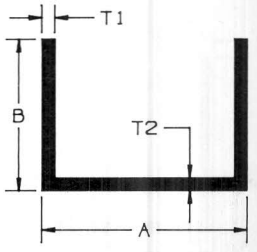
Please consult our customer service department for the availability of any of the above channel extrusions.

AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUDED CHANNELS

Part #	A	B	T1	T2	lb./ft.
80500	1.750	0.625	0.125	0.125	0.39
80499	1.750	0.750	0.125	0.125	0.43
84157	1.750	1.000	0.125	0.125	0.50
87656	1.750	1.000	0.250	0.187	0.86
87709	1.800	3.500	0.120	0.120	1.24
81175	2.000	0.500	0.125	0.125	0.40
80372	2.000	0.625	0.125	0.125	0.43
80502	2.000	0.750	0.125	0.125	0.46
82618	2.000	1.000	0.937	0.937	0.41
80444	2.000	1.000	0.125	0.125	0.55
82569	2.000	1.000	0.188	0.188	0.78
86774	2.000	1.750	0.125	0.125	0.75
80524	2.000	2.000	0.125	0.125	0.88
83517	2.000	2.000	0.250	0.250	1.60
87232	2.120	2.750	0.120	0.120	0.89
86686	2.180	0.750	0.090	0.090	0.37
82261	2.188	2.000	0.050	0.050	0.37
82262	2.375	2.000	0.050	0.050	0.38
82055	2.500	0.750	0.125	0.125	0.55
82570	2.500	1.000	0.188	0.188	0.89
82057	2.500	1.500	0.125	0.125	0.78
83510	2.500	2.500	0.125	0.125	0.99
83345	2.734	0.500	0.125	0.125	0.51
82007	2.750	1.125	0.250	0.250	1.34
82445	2.750	1.375	0.100	0.100	0.60
83543	2.875	1.000	0.125	0.125	0.89
81496	3.000	0.500	0.125	0.125	0.53
80816	3.000	1.000	0.125	0.125	0.71
82249	3.000	1.500	0.102	0.102	0.65
82008	3.000	2.000	0.375	0.375	2.73
83511	3.000	3.000	0.125	0.125	1.20
82006	3.500	1.250	0.250	0.250	1.61
82009	3.500	1.750	0.250	0.250	1.91
80605	4.000	1.500	0.125	0.125	1.04
84152	4.000	1.750	0.125	0.125	1.04
87411	4.000	2.000	0.230	0.150	1.72
87086	4.000	2.750	0.125	0.125	1.35
87717	4.125	2.000	0.250	0.250	2.25
84151	4.500	1.750	0.125	0.125	1.16
82056	4.500	2.000	0.125	0.125	1.18
80713	5.000	2.000	0.188	0.188	1.88
83683	6.750	1.500	0.094	0.094	1.05

CHANNELS



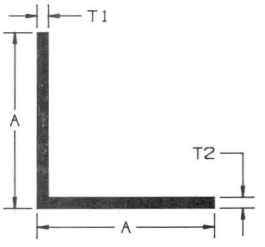
Please consult our customer service department for the availability of any of the above channel extrusions.

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

ANGLES

(equal legs)



Part #	A	T1	T2	lb./ft.
80442	0.500	0.625	0.625	0.10
80461	0.500	0.094	0.094	0.10
80447	0.500	0.125	0.125	0.13
80463	0.625	0.063	0.063	0.09
80462	0.625	0.094	0.094	0.13
80441	0.625	0.125	0.125	0.24
80464	0.750	0.063	0.063	0.11
80465	0.750	0.094	0.094	0.15
80378	0.750	0.125	0.125	0.21
86157	0.750	0.187	0.187	0.27
80470	1.000	0.063	0.063	0.15
80472	1.000	0.094	0.094	0.20
80165	1.000	0.125	0.125	0.27
80473	1.000	0.188	0.188	0.39
80466	1.000	0.250	0.250	0.51
85825	1.250	0.190	0.125	0.44
80450	1.250	0.125	0.125	0.35
80270	1.250	0.188	0.188	0.50
80467	1.250	0.250	0.250	0.64
83432	1.500	0.063	0.063	0.20
80339	1.500	0.125	0.125	0.41
80443	1.500	0.188	0.188	0.66
80183	1.500	0.250	0.250	0.81
80468	1.750	0.125	0.125	0.55
80440	1.750	0.188	0.188	0.72
80427	1.750	0.438	0.438	1.54
80178	2.000	0.125	0.125	0.56
80469	2.000	0.188	0.188	0.83
80448	2.000	0.250	0.250	1.09
85199	2.500	0.125	0.125	0.73
80521	3.000	0.125	0.125	0.88
84952	3.000	0.188	0.188	1.25
85261	3.000	0.250	0.250	1.66
82019	3.000	0.375	0.375	2.48
80791	3.500	0.125	0.125	1.01
85345	4.000	0.125	0.125	1.15

Please consult our customer service department for the availability of any of the above angle extrusions.

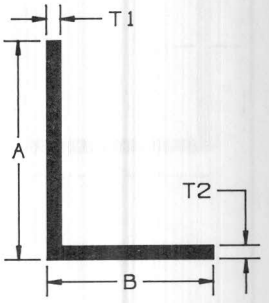
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUDED ANGLES

Part #	A	B	T1	T2	lb./ft.
82152	0.500	0.375	0.075	0.075	0.07
86926	0.700	0.380	0.220	0.200	0.22
80781	0.750	0.375	0.094	0.094	0.09
80800	0.750	0.500	0.063	0.063	0.18
84154	0.750	0.500	0.125	0.125	0.16
81528	0.875	0.625	0.125	0.125	0.20
80329	1.000	0.375	0.063	0.063	0.10
80782	1.000	0.500	0.094	0.094	0.16
80787	1.000	0.500	0.125	0.125	0.21
80678	1.000	0.750	0.125	0.125	0.25
87821	1.063	1.250	0.125	0.125	0.31
80344	1.063	0.500	0.188	0.188	0.30
80598	1.250	0.500	0.094	0.094	0.18
80588	1.250	0.500	0.125	0.125	0.24
87837	1.250	0.687	0.187	0.125	0.35
80419	1.250	0.750	0.125	0.125	0.28
88503	1.250	1.000	0.125	0.125	0.31
86382	1.300	1.200	0.125	0.125	0.34
82059	1.500	0.500	0.125	0.125	0.26
80786	1.500	0.750	0.125	0.125	0.32
84070	1.500	0.750	0.260	0.250	0.60
88904	1.500	0.940	0.128	0.437	0.64
80785	1.500	1.000	0.125	0.125	0.34
80449	1.500	1.000	0.156	0.156	0.41
87205	1.500	1.250	0.125	0.125	0.39
86381	1.675	1.250	0.125	0.125	0.42
89372	1.750	0.500	0.062	0.062	0.16
84979	1.750	1.000	0.125	0.125	0.38
86392	1.750	1.250	0.125	0.125	0.41
81388	2.000	0.313	0.125	0.125	0.31
82058	2.000	0.750	0.125	0.125	0.39
80346	2.000	1.000	0.125	0.125	0.48
80955	2.000	1.000	0.188	0.188	0.62
80760	2.000	1.250	0.250	0.250	0.85
85200	2.000	1.500	0.125	0.125	0.49
86579	2.000	1.500	0.188	0.188	0.73
80625	2.250	0.750	0.125	0.125	0.40
80241	2.250	0.750	0.250	0.250	0.80
80680	2.250	1.125	0.125	0.125	0.46
80631	2.250	1.500	0.125	0.123	0.51
84828	2.250	2.000	0.250	0.250	1.14
85196	2.500	1.000	0.125	0.125	0.51

ANGLES

(unequal legs)



Part #	A	B	T1	T2	lb./ft.
86383	2.500	1.100	0.125	0.125	0.60
85201	2.500	1.500	0.125	0.125	0.54
82232	2.500	1.500	0.094	0.094	0.41
89280	2.660	1.800	0.375	0.375	1.77
82179	3.000	0.500	0.375	0.375	1.41
80523	3.000	1.000	0.125	0.125	0.59
88399	3.000	1.500	0.187	0.187	0.90
85144	3.000	2.000	0.125	0.125	0.68
84808	3.000	2.000	0.250	0.250	1.38
83699	3.250	1.000	0.250	0.250	1.00
83362	3.500	0.750	0.125	0.125	1.00
80792	3.500	1.250	0.125	0.125	0.69
85545	3.500	3.000	0.125	0.125	0.89
89243	3.870	1.600	0.120	0.120	0.73
82180	4.000	0.500	0.375	0.375	1.86
84153	4.000	1.000	0.125	0.125	0.69
85044	4.750	2.750	0.250	0.250	2.09
85258	5.000	3.000	0.125	0.125	1.19
85257	5.000	4.000	0.125	0.125	1.26
85256	5.250	2.250	0.125	0.125	1.09

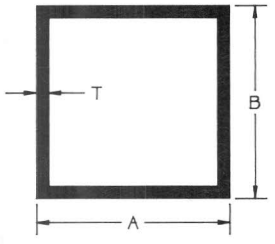
Please consult our customer service department for the availability of any of the above angle extrusions.

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

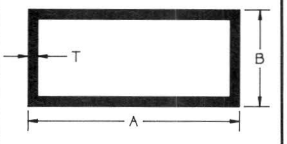
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUDED TUBES

SQUARE TUBES



RECTANGULAR TUBES



SQUARE TUBES				
Part #	**A**	**B**	**T**	**lb./ft.**
80535	0.500	0.500	0.063	0.13
80456	0.625	0.625	0.063	0.17
81434	0.750	0.750	0.063	0.20
81267	0.750	0.750	0.125	0.38
81773	0.844	0.844	0.125	0.40
81206	0.938	0.938	0.080	0.33
80647	1.000	1.000	0.625	0.28
80725	1.000	1.000	0.125	0.51
80878	1.250	1.250	0.078	0.46
81469	1.250	1.250	0.125	0.64
80548	1.500	1.500	0.125	0.77
80422	1.750	1.750	0.125	0.93
81584	2.000	2.000	0.078	0.65
80594	2.000	2.000	0.125	1.05
81144	2.250	2.250	0.078	0.77
80683	2.500	2.500	0.125	1.43
80722	3.000	3.000	0.125	1.55
83125	4.000	4.000	0.094	1.74
82306	4.000	4.000	0.125	2.20
83104	4.500	4.500	0.125	2.74

RECTANGULAR TUBES				
Part #	**A**	**B**	**T**	**lb./ft.**
82390	1.500	0.750	0.063	0.33
83007	1.500	0.750	0.078	0.38
81698	1.500	0.750	0.094	0.44
83008	1.500	1.000	0.078	0.56
80536	1.500	1.000	0.125	0.64
82617	1.750	1.000	0.094	0.58
83189	2.000	0.750	0.125	0.69
80679	2.000	1.000	0.125	0.80
80591	2.000	1.500	0.125	0.90
81123	2.250	1.750	0.125	1.03
81470	2.500	1.250	0.125	0.99
80865	2.500	1.500	0.125	1.09
81471	2.750	1.250	0.125	1.03
82060	3.000	1.000	0.125	1.05
82229	3.000	1.250	0.125	1.08
81221	3.000	1.750	0.125	1.30
81455	3.000	2.000	0.125	1.29
81436	3.250	1.500	0.125	1.26
81437	3.500	0.875	0.125	1.19
81435	3.500	1.750	0.125	1.40
81953	4.000	1.750	0.094	1.17
80494	4.000	1.750	0.125	1.59
81633	4.000	2.000	0.125	1.55
82421	4.500	1.750	0.125	1.70
83065	5.000	1.500	0.125	1.70
82422	5.000	1.750	0.125	1.95
82311	5.000	2.000	0.125	1.87
83080	5.000	3.000	0.125	2.15
82652	6.000	1.500	0.125	2.14
82131	6.000	2.000	0.125	2.23

Please consult our customer service department for the availability of any of the above tube extrusions.

AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
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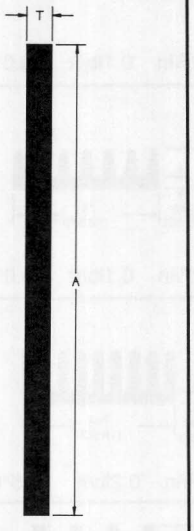
EXTRUDED BARS & TEES

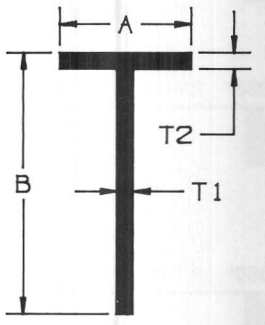
FLAT BARS



FLAT BARS			
Part #	**A**	**T**	**lb./ft.**
80731	0.375	0.125	0.06
80351	0.500	0.125	0.08
80406	0.500	0.188	0.11
80762	0.500	0.375	0.23
80529	0.750	0.125	0.11
80572	0.750	0.250	0.23
80352	1.000	0.188	0.23
81769	1.000	0.250	0.30
80757	1.000	0.375	0.45
80593	1.000	0.750	0.90
84283	1.250	0.250	0.38
80314	1.250	0.375	0.56
85198	1.375	0.250	0.41
80684	1.500	0.125	0.23
80411	1.500	0.188	0.34
81627	1.500	0.250	0.45
81179	1.500	0.375	0.68
81112	2.000	0.250	0.60
85202	2.000	0.313	0.75
82201	2.500	0.250	0.75
80318	2.500	0.375	1.13

Please consult our customer service department for the availability of any of the above bar & tee extrusions.

TEES



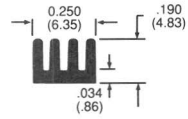
TEES					
Part #	**A**	**B**	**T1**	**T2**	**lb./ft.**
80328	0.500	1.000	0.063	0.063	0.10
86929	0.620	0.500	0.312	0.180	0.25
81048	0.688	0.813	0.125	0.125	0.21
81942	0.875	0.500	0.125	0.125	0.18
84486	0.875	1.250	0.125	0.156	0.33
80832	1.000	1.000	0.125	0.125	0.29
86990	1.000	1.250	0.187	0.125	0.39
80520	1.125	1.125	0.125	0.125	0.30
83333	1.250	0.672	0.070	0.070	0.15
84968	1.250	0.875	0.125	0.125	0.29
81052	1.375	1.375	0.125	0.125	0.40
82801	1.500	1.000	0.187	0.187	0.50
80381	1.500	1.250	0.187	0.187	0.56
83509	1.500	1.500	0.125	0.125	0.41
83672	1.500	1.500	0.187	0.250	0.73
85824	1.500	1.500	0.250	0.250	0.79
81472	1.500	1.750	0.188	0.188	0.67
82636	1.750	1.750	0.188	0.188	0.71
80242	2.000	1.625	0.156	0.156	0.63
80522	2.000	2.000	0.188	0.188	0.83
87202	2.000	2.000	0.250	0.250	1.13
82044	2.563	0.750	0.250	0.250	0.89

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

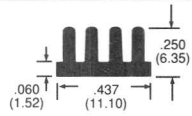
Note: The profiles are not to scale in relation to each other.

1



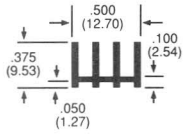
61565* 1.7 in^2/in 0.04lb/ft 41.2°C/W/3in

2



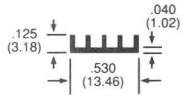
68265* 2.4 in^2/in 0.1lb/ft 29.1°C/W/3in

3



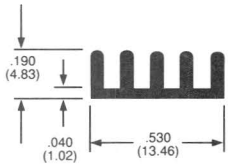
63450* 3.7 in^2/in 0.1lb/ft 18.9°C/W/3in

4



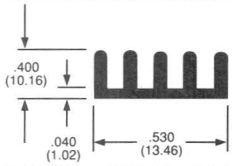
66370* 2.0 in^2/in 0.05lb/ft 35.0°C/W/3in

5



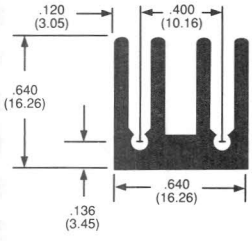
61945 2.7 in^2/in 0.1lb/ft 25.9°C/W/3in

6



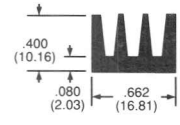
62000 4.8 in^2/in 0.2lb/ft 14.6°C/W/3in

7



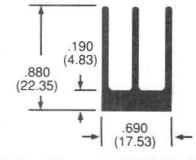
62470 5.6 in^2/in 0.3lb/ft 12.0°C/W/3in

8



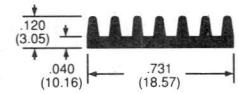
64640 4.0 in^2/in 0.4lb/ft 17.3°C/W/3in

9



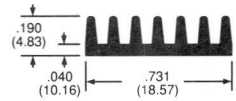
63840* 4.5 in^2/in 0.3lb/ft 15.6°C/W/3in

10



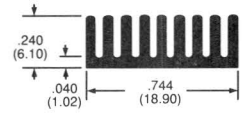
62750* 2.7 in^2/in 0.1lb/ft 26.0°C/W/3in

11



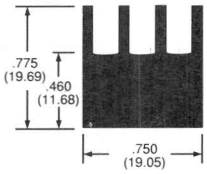
61610 3.5 in^2/in 0.1lb/ft 20.0°C/W/3in

12



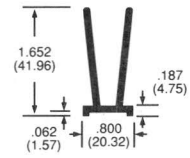
61995 5.2 in^2/in 0.2lb/ft 13.5°C/W/3in

13



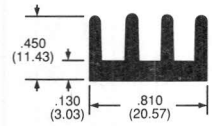
62380 5.0 in^2/in 0.6lb/ft 14.0°C/W/3in

14



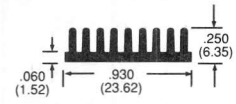
66530* 7.8 in^2/in 0.3lb/ft 9.0°C/W/3in

15



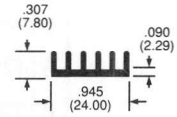
61520* 4.6 in^2/in 0.3lb/ft 15.3°C/W/3in

16



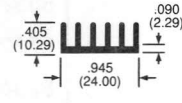
68260* 5.1 in^2/in 0.2lb/ft 13.7°C/W/3in

17



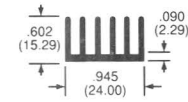
67595* 4.5 in^2/in 0.2lb/ft 15.6°C/W/3in

18



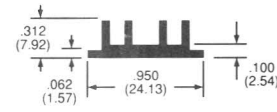
67600* 5.6 in^2/in 0.2lb/ft 12.5°C/W/3in

19



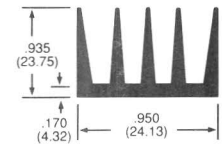
67605* 8.0 in^2/in 0.3lb/ft 8.8°C/W/3in

20



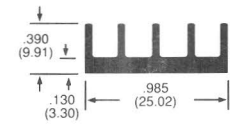
63415* 3.9 in^2/in 0.2lb/ft 17.9°C/W/3in

21



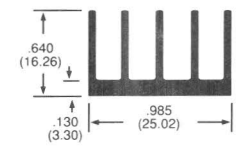
64675 9.9 in^2/in 0.5lb/ft 7.1°C/W/3in

22



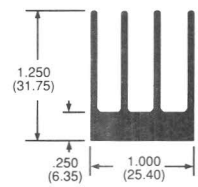
65715 4.6 in^2/in 0.3lb/ft 15.2°C/W/3in

23



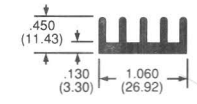
63240* 7.3 in^2/in 0.4lb/ft 9.6°C/W/3in

24



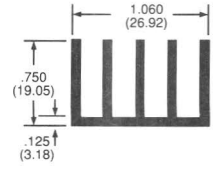
62560 10.5 in^2/in 0.6lb/ft 6.7°C/W/3in

25



62925 5.6 in^2/in 0.3lb/ft 12.5°C/W/3in

26



63400* 8.6 in^2/in 0.4lb/ft 8.1°C/W/3in

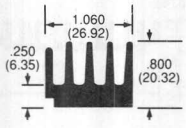
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

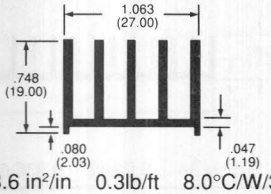
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh. under natural convection, for black anodized heat sinks.

1



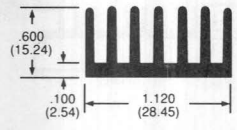
62930 7.9 in²/in 0.6lb/ft 8.8°C/W/3in

2



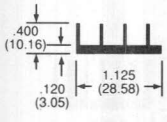
62465 8.6 in²/in 0.3lb/ft 8.0°C/W/3in

3



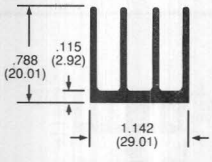
64350* 9.4 in²/in 0.4lb/ft 7.4°C/W/3in

4



60270* 4.7 in²/in 0.2lb/ft 14.9°C/W/3in

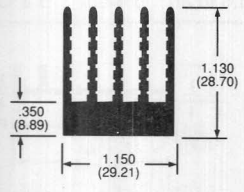
5



66420* 7.0 in²/in 0.4lb/ft 10.0°C/W/3in

6

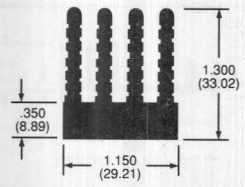
Serrated fins



66500* 11.3 in²/in 0.8lb/ft 6.2°C/W/3in

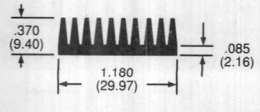
7

Serrated fins



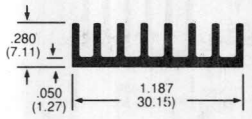
62230 13.7in²/in 0.8lb/ft 5.1°C/W/3in

8



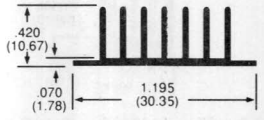
63045* 8.2 in²/in 0.4lb/ft 8.6°C/W/3in

9



63455 6.2 in²/in 0.2lb/ft 11.4°C/W/3in

10

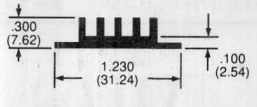


64760* 7.3 in²/in 0.2lb/ft 9.6°C/W/3in

Performance vs. Length

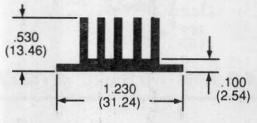
The thermal resistance of a heat sink changes significantly with length. To convert the published natural convection thermal resistance at a 3 inch length to a desired length, see page 5 for a length correction table.

11



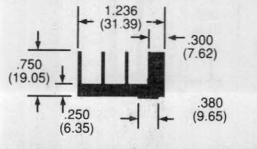
63300 4.7 in²/in 0.2lb/ft 14.0°C/W/3in

12



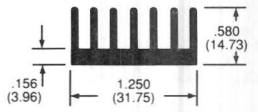
63295* 7.0 in²/in 0.3lb/ft 9.7°C/W/3in

13



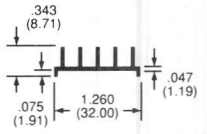
63445* 6.7 in²/in 0.7lb/ft 10.4°C/W/3in

14



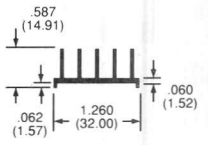
62035 8.8 in²/in 0.5lb/ft 8.0°C/W/3in

15



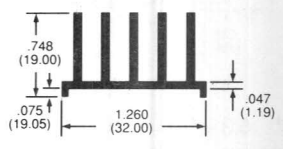
67290* 5.1 in²/in 0.2lb/ft 13,7°C/W/3in

16



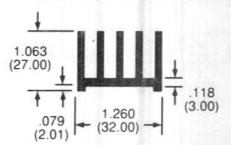
67580* 7.5 in²/in 0.3lb/ft 9.3°C/W/3in

17



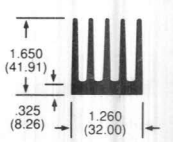
62275 9.2 in²/in 0.3b/ft 7.6°C/W/3in

18



65430* 11.7 in²/in 0.8lb/ft 6.0°C/W/3in

19

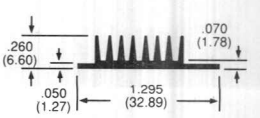


65245 15.9 in²/in 1.3lb/ft 4.4°C/W/3in

20

63055* 7.7 in²/in 0.7lb/ft 9.1°C/W/3in

21



63475* 5.3 in²/in 0.2lb/ft 13.2°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

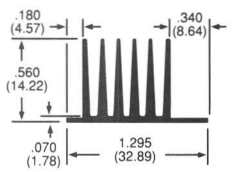
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

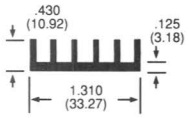
Note: The profiles are not to scale in relation to each other.

1



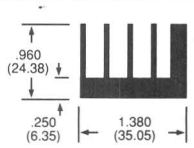
63470* 8.1 in²/in 0.3lb/ft 8.6°C/W/3in

2



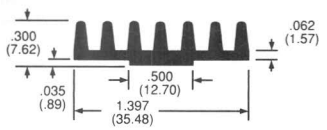
65290* 3.7 in²/in 0.3lb/ft 18.9°C/W/3in

3



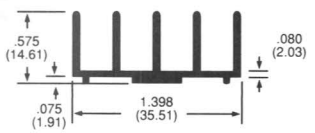
66805 10.3 in²/in 0.8lb/ft 6.8°C/W/3in

4



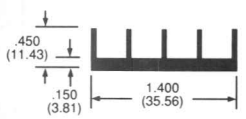
67340* 5.3 in²/in 0.3lb/ft 13.2°C/W/3in

5



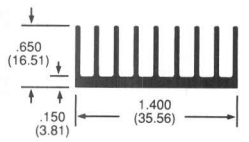
66795* 7.2 in²/in 0.3lb/ft 9.7°C/W/3in

6



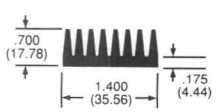
66685* 6.1 in²/in 0.3lb/ft 11.5°C/W/3in

7



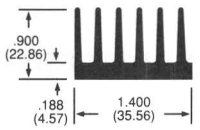
66450* 11.2 in²/in 0.5lb/ft 6.3°C/W/3in

8



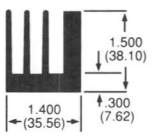
63305* 10.5 in²/in 0.7lb/ft 6.6°C/W/3in

9



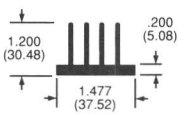
66460* 11.1 in²/in 0.7lb/ft 6.3°C/W/3in

10



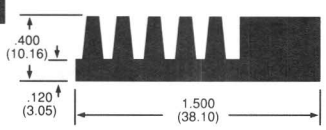
61605 13.0 in²/in 1.3lb/ft 5.4°C/W/3in

11



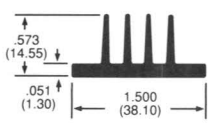
64355* 11.3 in²/in 0.6lb/ft 6.2°C/W/3in

12



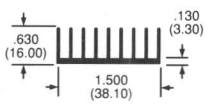
62670* 6.6 in²/in 0.5lb/ft 10.6°C/W/3in

13



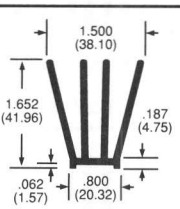
60875* 7.3 in²/in 0.3lb/ft 9.5°C/W/3in

14



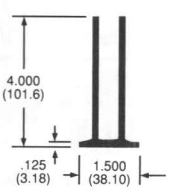
66365* 13.0 in²/in 0.5lb/ft 5.4°C/W/3in

15



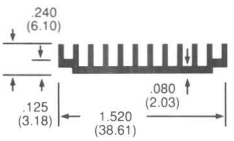
63915* 14.8 in²/in 0.8lb/ft 4.7°C/W/3in

16



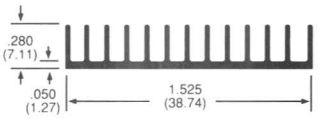
60990 18.8 in²/in 1.4lb/ft 3.7°C/W/3in

17



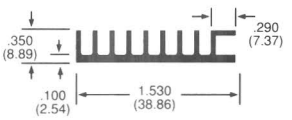
63605* 7.0 in²/in 0.3lb/ft 10.0°C/W/3in

18



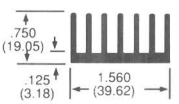
63480 8.5 in²/in 0.2lb/ft 8.3°C/W/3in

19



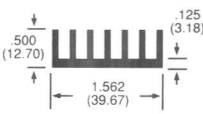
67855* 8.1 in²/in 0.3lb/ft 8.6°C/W/3in

20



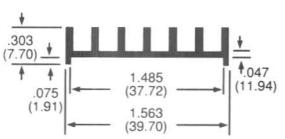
61080 12.1 in²/in 0.5lb/ft 5.7°C/W/3in

21



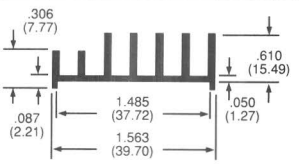
67110* 8.6 in²/in 0.4lb/ft 8.2°C/W/3in

22



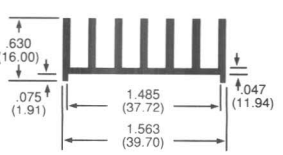
67285* 6.0 in²/in 0.2lb/ft 11.7°C/W/3in

23



67585* 9.3 in²/in 0.3lb/ft 7.5°C/W/3in

24



63600* 10.5 in²/in 0.4lb/ft 6.7°C/W/3in

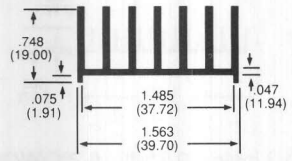
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

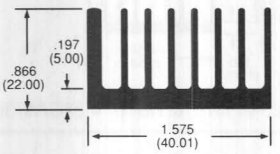
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



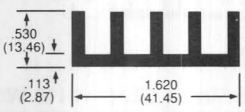
62400 12.3 in²/in 0.5lb/ft 5.6°C/W/3in

2



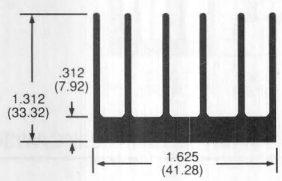
67575* 12.2 in²/in 0.9lb/ft 5.7°C/W/3in

3



62040* 7.7 in²/in 0.6lb/ft 9.0°C/W/3in

4

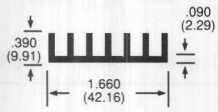


67180* 15.6 in²/in 1.1lb/ft 4.5°C/W/3in

5

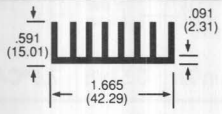
61215 15.9 in²/in 1.3lb/ft 4.4°C/W/3in

6



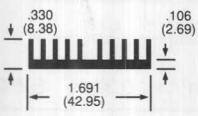
67620* 7.6 in²/in 0.3lb/ft 9.2°C/W/3in

7



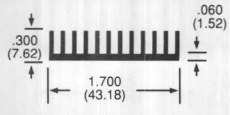
67995* 11.5 in²/in 0.5lb/ft 6.1°C/W/3in

8



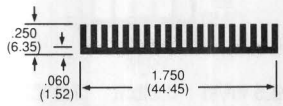
68240* 8.0 in²/in 0.3lb/ft 8.8°C/W/3in

9



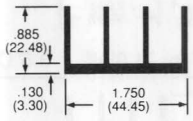
63570* 9.3 in²/in 0.3lb/ft 7.5°C/W/3in

10



65060* 10.8 in²/in 0.3lb/ft 6.5°C/W/3in

11

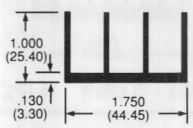


66830 9.8 in²/in 0.5lb/ft 7.1°C/W/3in

Temperature Rise Factor

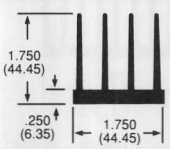
The published thermal resistance assumes a 75° C temperature rise of the heat sink above the ambient temperature. To determine the thermal resistance in natural convection for other temperature rises, see page 4 for a temperature correction table.

12



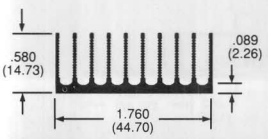
62305* 10.7 in²/in 0.6lb/ft 6.5°C/W/3in

13



60365* 15.3 in²/in 1.3lb/ft 4.5°C/W/3in

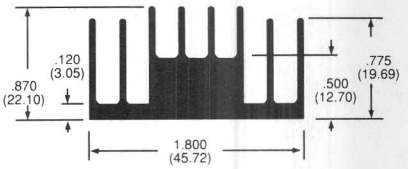
14



Serrated fins

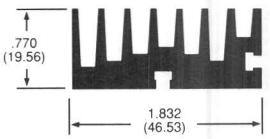
67240* 15.9 in²/in 0.5lb/ft 4.4°C/W/3in

15



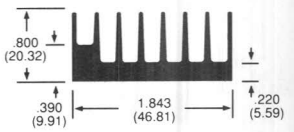
61885* 12.6 in²/in 0.9lb/ft 5.6°C/W/3in

16



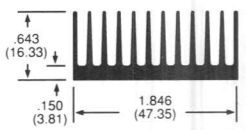
62675* 11.9 in²/in 1.0lb/ft 5.9°C/W/3in

17



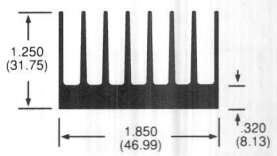
64660* 12.5 in²/in 1.0lb/ft 5.6°C/W/3in

18



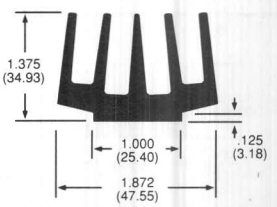
64635 15.8 in²/in 0.7lb/ft 4.4°C/W/3in

19



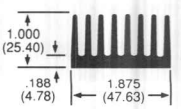
66950* 18.3 in²/in 1.4lb/ft 3.8°C/W/3in

20



65710* 13.3 in²/in 1.3lb/ft 5.3°C/W/3in

21



60595 16.0 in²/in 1.1lb/ft 4.4°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

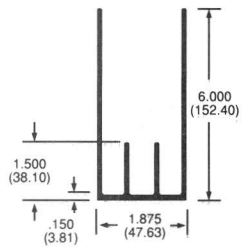
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

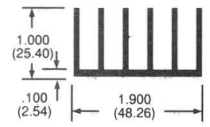
Note: The profiles are not to scale in relation to each other.

1



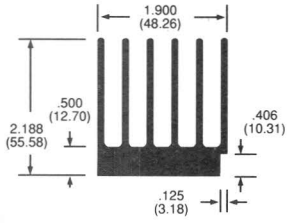
61900 34.9 in^2/in 2.4lb/ft 2.0°C/W/3in

2



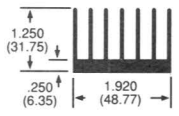
66735* 14.8 in^2/in 0.6lb/ft 4.7°C/W/3in

3



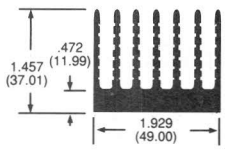
64130* 24.2 in^2/in 2.0lb/ft 2.9°C/W/3in

4



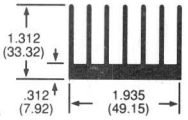
62745* 18.3 in^2/in 1.1lb/ft 3.8°C/W/3in

5 *Serrated fins*



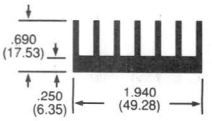
65065* 19.7 in^2/in 1.7lb/ft 3.6°C/W/3in

6



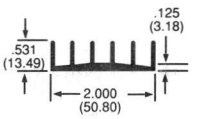
62815* 18.5 in^2/in 1.3lb/ft 3.8°C/W/3in

7



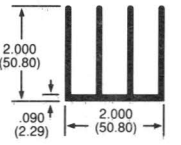
66770* 10.5 in^2/in 0.9lb/ft 6.7°C/W/3in

8



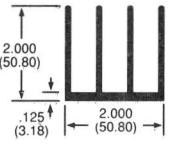
60885* 9.5 in^2/in 0.5lb/ft 7.3°C/W/3in

9



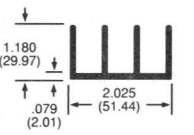
62870* 19.5 in^2/in 1.0lb/ft 3.6°C/W/3in

10



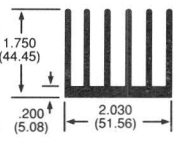
66255* 19.3 in^2/in 1.1lb/ft 3.6°C/W/3in

11



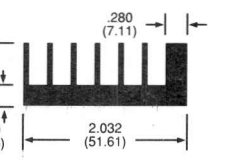
62825 13.1 in^2/in 0.6lb/ft 5.3°C/W/3in

12



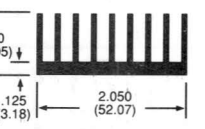
67925* 22.8 in^2/in 1.3lb/ft 3.1°C/W/3in

13



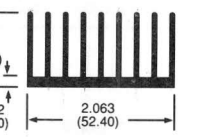
62935 12.3 in^2/in 1.0lb/ft 5.7°C/W/3in

14



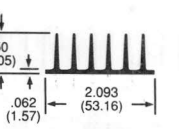
65250 15.6 in^2/in 0.6lb/ft 4.5°C/W/3in

15



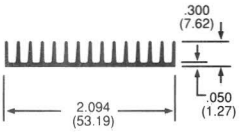
63120 20.5 in^2/in 1.0lb/ft 3.6°C/W/3in

16



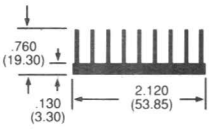
60870* 12.6 in^2/in 0.5lb/ft 5.6°C/W/3in

17



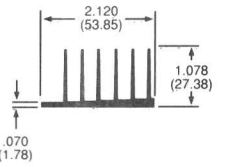
63790* 11.3 in^2/in 0.3lb/ft 6.2°C/W/3in

18



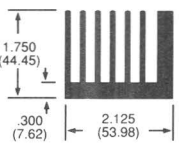
67910 15.6 in^2/in 0.7lb/ft 4.5°C/W/3in

19



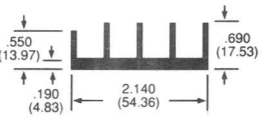
61335* 17.0 in^2/in 1.0lb/ft 4.1°C/W/3in

20



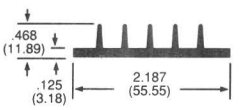
63135 25.2 in^2/in 2.1lb/ft 2.6°C/W/3in

21



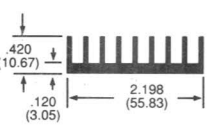
67545* 9.3 in^2/in 0.6lb/ft 7.5°C/W/3in

22



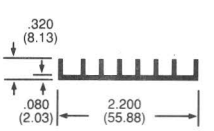
61405* 8.0 in^2/in 0.4lb/ft 8.8°C/W/3in

23



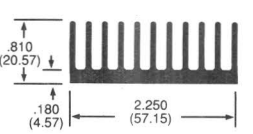
63195* 10.0 in^2/in 0.5lb/ft 7.0°C/W/3in

24



66730* 8.3 in^2/in 0.3lb/ft 8.4°C/W/3in

25



64690* 18.7 in^2/in 1.2lb/ft 3.7°C/W/3in

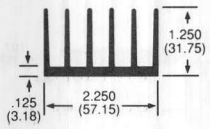
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

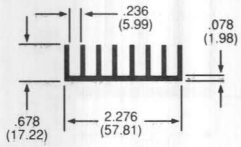
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



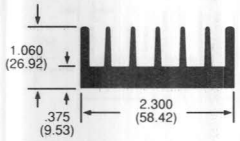
61460 18.3 in²/in 1.0lb/ft 3.8°C/W/3in

2



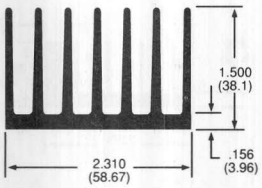
60975 15.8 in²/in 0.7lb/ft 4.4°C/W/3in

3



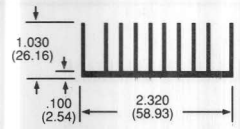
67165* 14.9in²/in 1.7lb/ft 4.7°C/W/3in

4



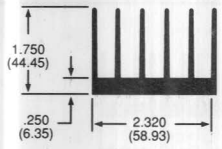
62500 23.7 in²/in 1.4lb/ft 3.0°C/W/3in

5



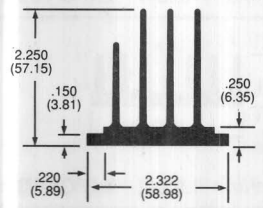
66725* 23.4 in²/in 0.8lb/ft 3.0°C/W/3in

6



65600* 22.5 in²/in 1.9lb/ft 3.1°C/W/3in

7

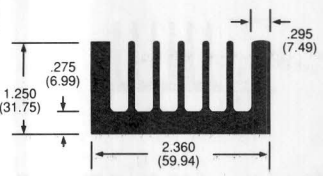


67360* 19.5 in²/in 1.4lb/ft 3.6°C/W/3in

8

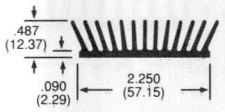
61675* 17.9 in²/in 0.9lb/ft 3.9°C/W/3in

9



65895 18.1 in²/in 1.9lb/ft 3.9°C/W/3in

10

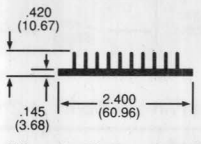


64620* 16.0 in²/in 0.6lb/ft 4.4°C/W/3in

Optimization

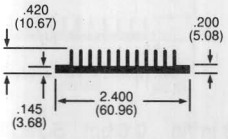
Optimization in either forced or natural convection can result in cost and size reduction of the heat sink. In forced convection, optimization can reduce the size of the fan or blower. See page 4 for more information concerning optimization.

11



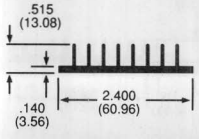
65180* 7.8 in²/in 0.6lb/ft 9.0°C/W/3in

12



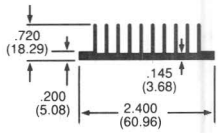
66000* 11.1 in²/in 0.7lb/ft 6.3°C/W/3in

13



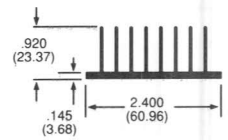
66385* 10.9 in²/in 0.6lb/ft 6.4°C/W/3in

14



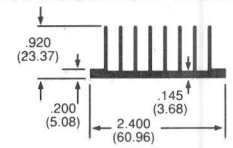
65795* 16.2 in²/in 0.9lb/ft 4.3°C/W/3in

15



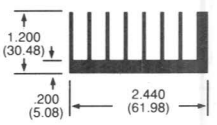
65195 17.5 in²/in 0.9lb/ft 4.0°C/W/3in

16



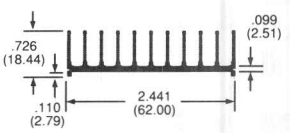
65550* 17.2 in²/in 0.9lb/ft 4.1°C/W/3in

17



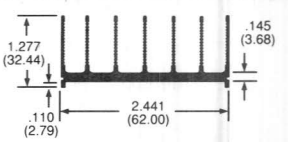
65490* 21.3 in²/in 1.4lb/ft 3.3°C/W/3in

18 *Serrated fins*



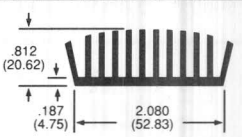
67980* 17.8 in²/in 0.7lb/ft 3.9°C/W/3in

19 *Serrated fins*



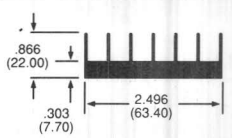
67985* 22.0 in²/in 0.9lb/ft 3.2°C/W/3in

20



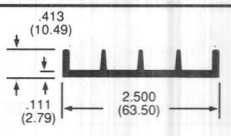
65700 18.5 in²/in 1.0lb/ft 3.8°C/W/3in

21



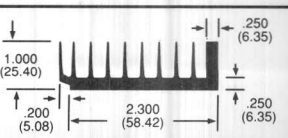
63015* 13.5 in²/in 1.2lb/ft 5.2°C/W/3in

22



61740* 8.6 in²/in 0.5lb/ft 8.1°C/W/3in

23



63310 12.8 in²/in 1.5lb/ft 5.5°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

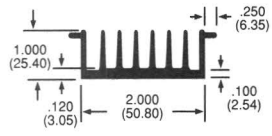
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

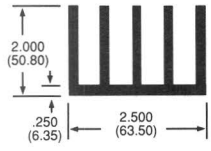
Note: The profiles are not to scale in relation to each other.

1



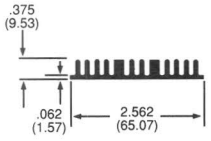
64390 21.0 in^2/in 1.1lb/ft 3.3°C/W/3in

2 †



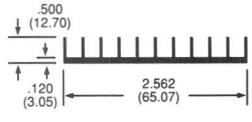
63830 23.0 in^2/in 2.9lb/ft 3.0°C/W/3in

3



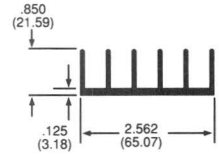
60490* 14.5 in^2/in 0.5lb/ft 4.8°C/W/3in

4



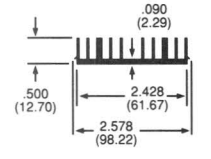
65035 13.5 in^2/in 0.7lb/ft 5.2°C/W/3in

5



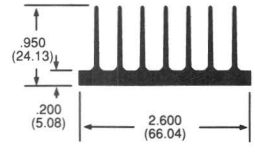
61555 13.9 in^2/in 0.8lb/ft 5.0°C/W/3in

6



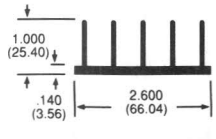
62020* 13.5 in^2/in 0.6lb/ft 5.2°C/W/3in

7



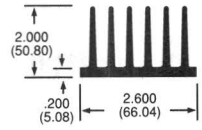
67835* 15.7 in^2/in 1.0lb/ft 4.5°C/W/3in

8



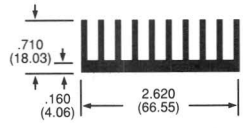
61680 14.2 in^2/in 0.8lb/ft 4.9°C/W/3in

9



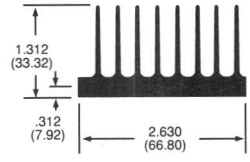
63860* 26.4 in^2/in 1.8lb/ft 2.7°C/W/3in

10



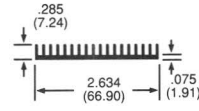
67790* 16.6 in^2/in 1.2lb/ft 4.2°C/W/3in

11



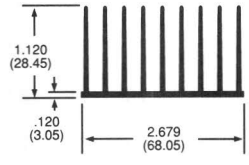
65665 21.4 in^2/in 1.6lb/ft 3.3°C/W/3in

12



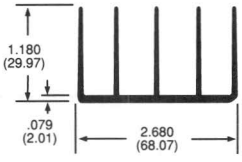
68145* 12.4 in^2/in 0.4lb/ft 5.6°C/W/3in

13



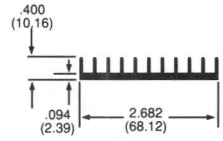
67325* 23.1 in^2/in 1.0lb/ft 3.0°C/W/3in

14



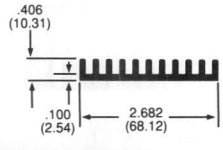
62820 16.5 in^2/in 0.7lb/ft 4.2°C/W/3in

15



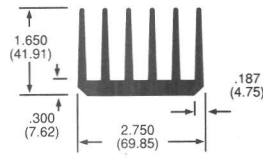
60995 12.3 in^2/in 0.6lb/ft 5.7°C/W/3in

16



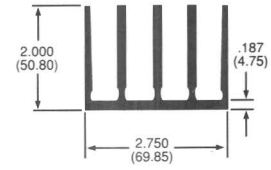
62180 12.3 in^2/in 0.6lb/ft 5.7°C/W/3in

17



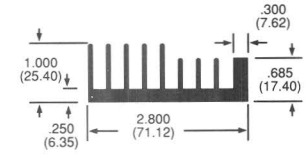
64330 20.9 in^2/in 2.5lb/ft 3.3°C/W/3in

18



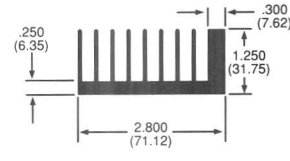
60090* 23.2 in^2/in 2.0lb/ft 3.0°C/W/3in

19



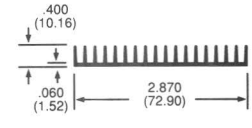
65270 16.8 in^2/in 1.3lb/ft 4.2°C/W/3in

20



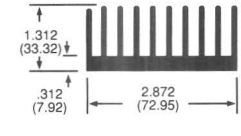
61895 24.1 in^2/in 1.8lb/ft 2.9°C/W/3in

21



64020* 17.3 in^2/in 0.5lb/ft 4.0°C/W/3in

22

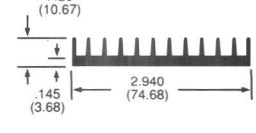


62600 26.2 in^2/in 1.8lb/ft 2.7°C/W/3in

23

65760* 16.3 in^2/in 1.9lb/ft 4.3°C/W/3in

24



65395* 12.4 in^2/in 0.7lb/ft 5.6°C/W/3in

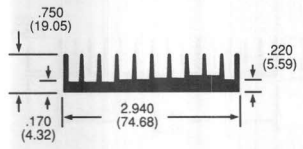
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

Note: The profiles are not to scale in relation to each other.

Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

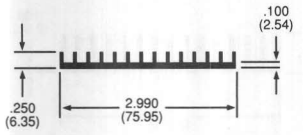
EXTRUSIONS

1



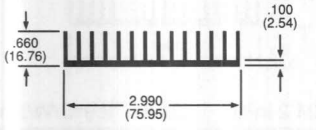
63785* 17.8 in²/in 1.4lb/ft 3.9°C/W/3in

2



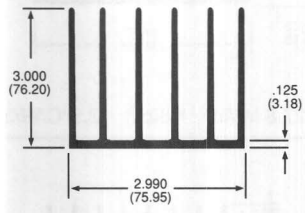
66680* 10.6 in²/in 0.5lb/ft 6.6°C/W/3in

3



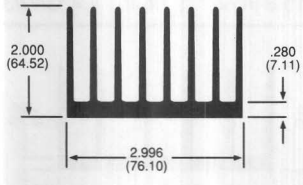
66675* 22.9 in²/in 0.8lb/ft 3.1°C/W/3in

4



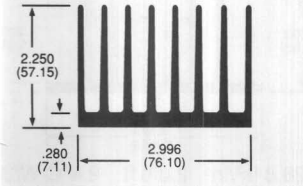
65675* 40.1 in²/in 2.6lb/ft 1.7°C/W/3in

5 *Serrated fins*



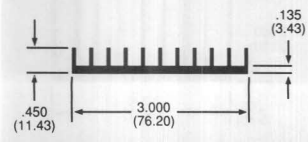
63020 34.1 in²/in 2.3lb/ft 1.9°C/W/3in

6 *Serrated fins*



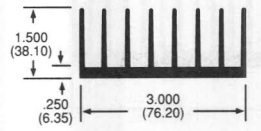
63730 38.1 in²/in 2.8lb/ft 1.8°C/W/3in

7



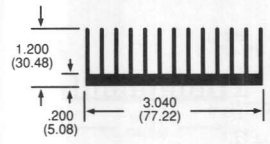
67260* 13.1 in²/in 0.7lb/ft 5.3°C/W/3in

8



64800 26.5 in²/in 1.9lb/ft 2.6°C/W/3in

9

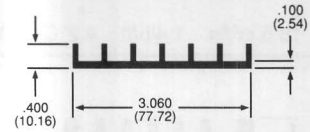


67655* 31.7 in²/in 1.7lb/ft 2.2°C/W/3in

Technical Capabilities

Aavid Engineering's application engineering department has the capability to perform a full thermal analysis, including optimization, in order to find the right Aavid heat sink for your application. Please refer to the Request for Information sheets on pages 64 and 65.

10

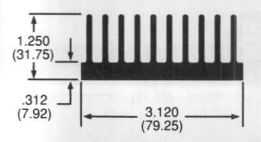


63170* 10.5 in²/in 0.5lb/ft 6.7°C/W/3in

11

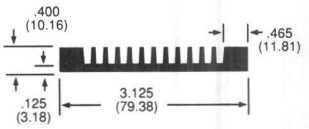
65810 26.2 in²/in 1.9lb/ft 2.7°C/W/3in

12



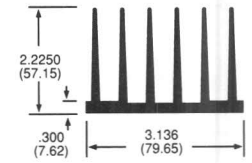
61315 25.6 in²/in 2.3lb/ft 2.7°C/W/3in

13



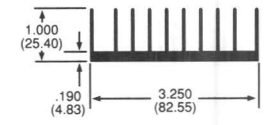
62740* 13.0 in²/in 1.0lb/ft 5.4°C/W/3in

14



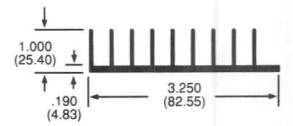
62860* 30.6 in²/in 2.2lb/ft 2.3°C/W/3in

15



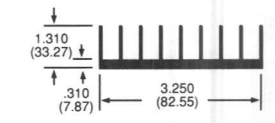
60760 22.7 in²/in 1.6lb/ft 3.1°C/W/3in

16



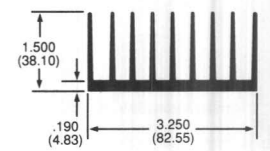
66010* 21.1 in²/in 1.4lb/ft 3.3°C/W/3in

17



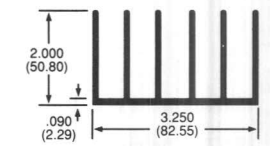
64585* 25.1 in²/in 2.1lb/ft 2.8°C/W/3in

18



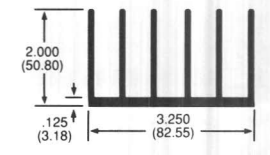
60765 30.1 in²/in 1.9lb/ft 2.3°C/W/3in

19



62875 29.6 in²/in 1.6lb/ft 2.4°C/W/3in

20



66260* 29.3 in²/in 1.7lb/ft 2.4°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

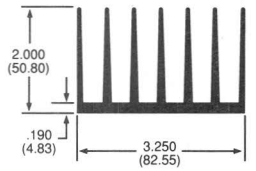
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

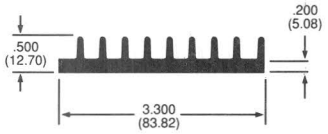
Note: The profiles are not to scale in relation to each other.

1



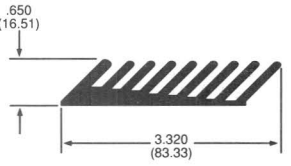
60770 31.9 in^2/in 2.5lb/ft 2.2°C/W/3in

2



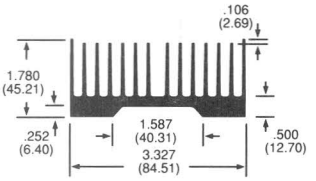
66655* 9.7 in^2/in 1.1lb/ft 7.2°C/W/3in

3 †



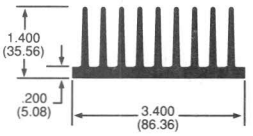
62395 16.2 in^2/in 1.2lb/ft 4.3°C/W/3in

4



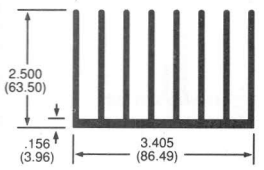
67660* 37.7 in^2/in 2.8lb/ft 1.9°C/W/3in

5



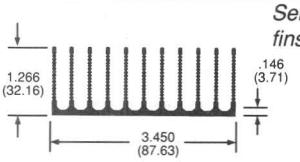
62195* 28.8 in^2/in 2.1lb/ft 2.3°C/W/3in

6



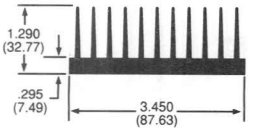
66835* 44.0 in^2/in 2.4lb/ft 1.6°C/W/3in

7 *Serrated fins*



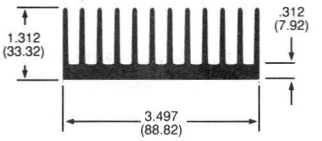
67590* 44.4 in^2/in 1.6lb/ft 1.6°C/W/3in

8



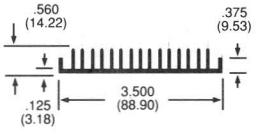
60250 28.5 in^2/in 2.1lb/ft 2.4°C/W/3in

9



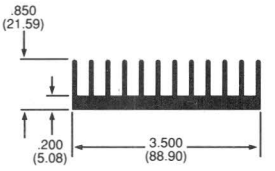
67205* 30.3 in^2/in 2.5lb/ft 2.3°C/W/3in

10



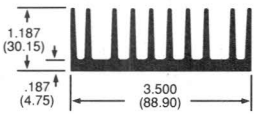
64310 21.7 in^2/in 0.9lb/ft 3.2°C/W/3in

11



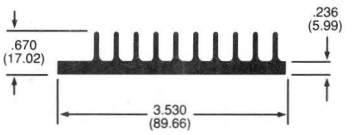
62200 23.0 in^2/in 1.5lb/ft 3.0°C/W/3in

12



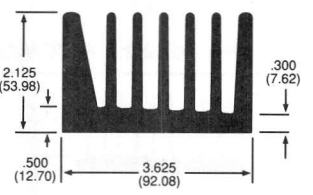
61010 27.4 in^2/in 1.8lb/ft 2.6°C/W/3in

13



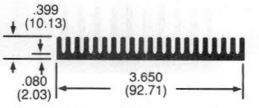
63695* 16.5 in^2/in 1.4lb/ft 4.2°C/W/3in

14



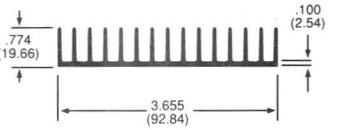
63965* 30.0 in^2/in 4.9lb/ft 2.3°C/W/3in

15



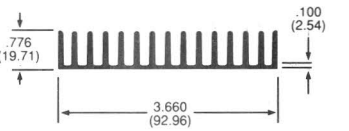
62650 20.9 in^2/in 0.9lb/ft 3.4°C/W/3in

16



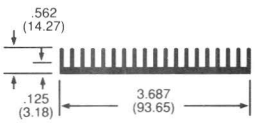
67190* 26.8 in^2/in 1.2lb/ft 2.6°C/W/3in

17



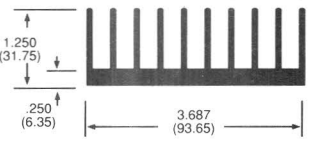
63520* 27.8 in^2/in 1.4lb/ft 2.5°C/W/3in

18 *Serrated fins*



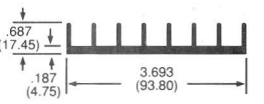
64870* 24.2 in^2/in 1.0lb/ft 2.9°C/W/3in

19



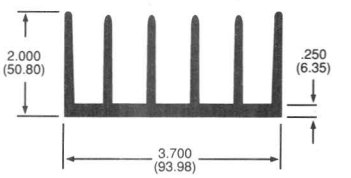
60485 27.8 in^2/in 1.8lb/ft 2.5°C/W/3in

20



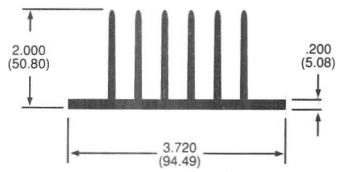
62350 15.8 in^2/in 1.1lb/ft 4.4°C/W/3in

21



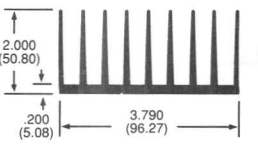
62520* 28.0 in^2/in 2.9lb/ft 2.5°C/W/3in

22



67005* 28.8 in^2/in 2.0lb/ft 2.4°C/W/3in

23



64750* 40.4 in^2/in 2.9lb/ft 1.7°C/W/3in

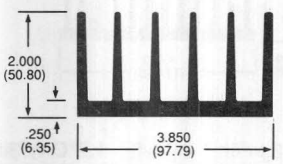
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

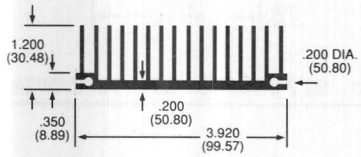
Key:
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



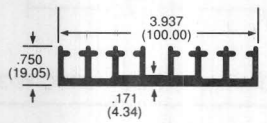
60825 30.0 in²/in 2.9lb/ft 2.3°C/W/3in

2



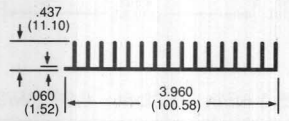
63535* 31.2 in²/in 2.0lb/ft 2.2°C/W/3in

3



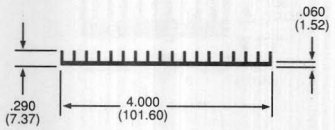
60155 22.0 in²/in 1.2lb/ft 3.2°C/W/3in

4



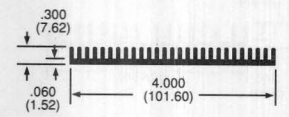
65230* 19.5 in²/in 0.8lb/ft 3.6°C/W/3in

5



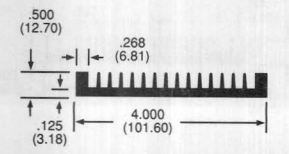
64735* 16.4 in²/in 0.5lb/ft 4.3°C/W/3in

6



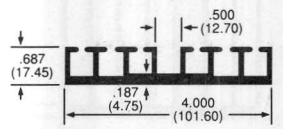
61585 21.1 in²/in 0.7lb/ft 3.3°C/W/3in

7



65215* 19.7 in²/in 1.3lb/ft 3.6°C/W/3in

8



60310 20.7 in²/in 1.3lb/ft 3.4°C/W/3in

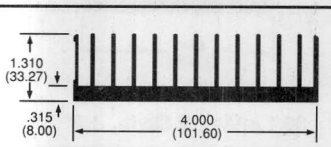
9

60660 32.9 in²/in 1.9lb/ft 1.9°C/W/3in

Fabrication Capabilities

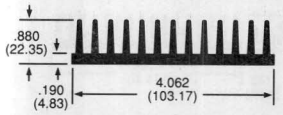
Aavid has extensive manufacturing capabilities for the complete fabrication of heat sinks from extrusions. The Aavid plant is equipped with high speed saws, a battery of CNC machining centers, and an automated anodizing line - incorporating the latest technology available in the world.

10



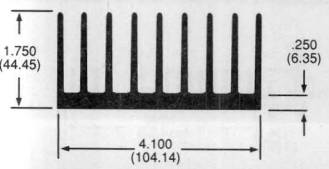
62705 34.7 in²/in 2.8lb/ft 2.0°C/W/3in

11



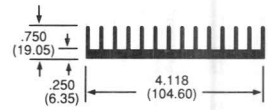
63115 26.4 in²/in 1.7lb/ft 2.5°C/W/3in

12



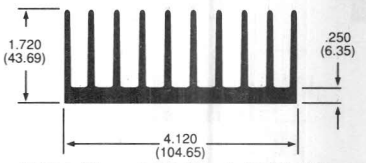
64095* 34.8 in²/in 2.7lb/ft 2.0°C/W/3in

13



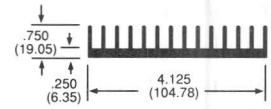
64045* 22.0 in²/in 1.7lb/ft 3.2°C/W/3in

14



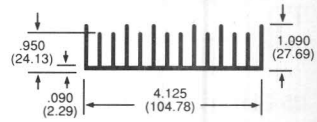
66455* 37.0 in²/in 3.5lb/ft 1.9°C/W/3in

15



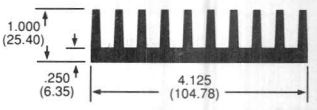
63985* 22.3 in²/in 1.7lb/ft 3.1°C/W/3in

16



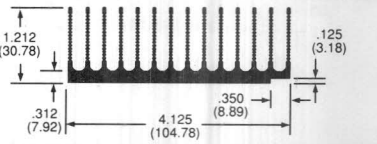
61620* 34.2 in²/in 1.4lb/ft 2.0°C/W/3in

17



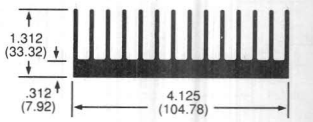
61290 23.7 in²/in 2.7lb/ft 3.0°C/W/3in

18 *Serrated fins*



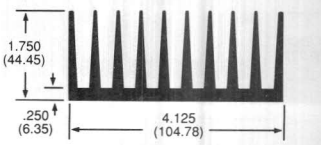
62735* 32.5 in²/in 2.6lb/ft 2.2°C/W/3in

19



61090 36.9 in²/in 3.0lb/ft 2.0°C/W/3in

20



60095 38.8 in²/in 3.5lb/ft 1.8°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

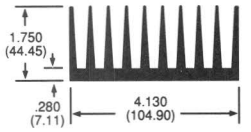
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in²/in	2.54	cm²/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

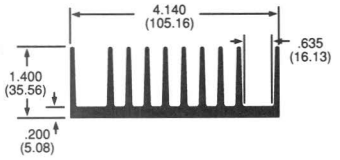
Note: The profiles are not to scale in relation to each other.

1



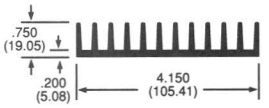
63960 38.3 in²/in 3.5lb/ft 1.8°C/W/3in

2



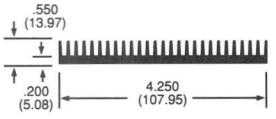
63275 32.7 in²/in 2.0lb/ft 2.0°C/W/3in

3



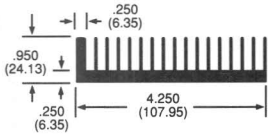
64855 21.9 in²/in 1.6lb/ft 3.2°C/W/3in

4



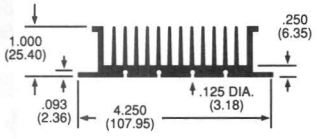
66505* 25.9 in²/in 1.6lb/ft 2.7°C/W/3in

5



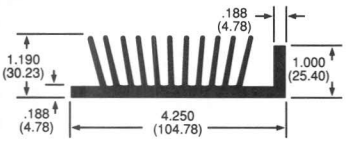
64565* 32.8 in²/in 2.2lb/ft 2.1°C/W/3in

6



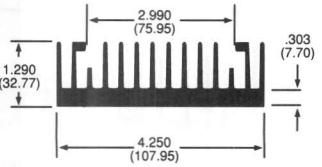
60940* 31.3 in²/in 2.3lb/ft 2.2°C/W/3in

7



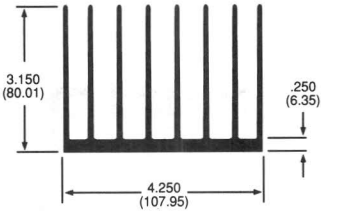
62145 32.4 in²/in 2.2lb/ft 2.1°C/W/3in

8



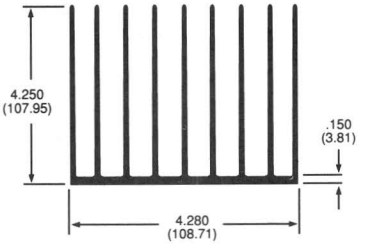
65630 34.8 in²/in 2.6lb/ft 2.0°C/W/3in

9



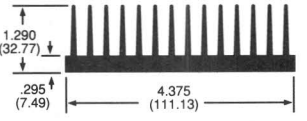
65625 54.1 in²/in 4.9lb/ft 1.3°C/W/3in5

10



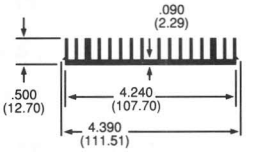
67735* 81.6 in²/in 5.3lb/ft 0.9°C/W/3in

11



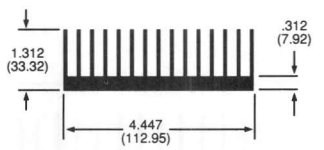
60560 36.5 in²/in 2.7lb/ft 1.8°C/W/3in

12



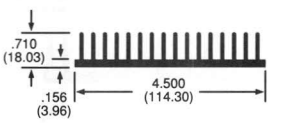
62025* 22.0 in²/in 1.1lb/ft 3.2°C/W/3in

13



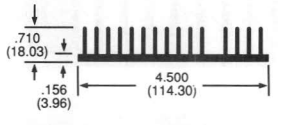
66510* 39.1 in²/in 2.8lb/ft 1.8°C/W/3in

14



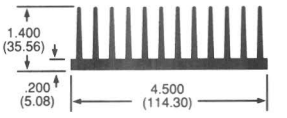
65330* 27.0 in²/in 1.8lb/ft 2.6°C/W/3in

15



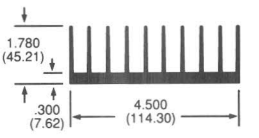
62055* 18.2 in²/in 1.7lb/ft 3.8°C/W/3in

16



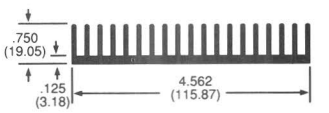
61075 38.2 in²/in 2.4lb/ft 1.7°C/W/3in

17



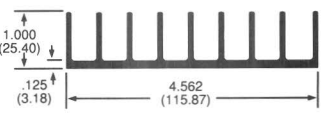
64745* 39.2 in²/in 3.9lb/ft 1.7°C/W/3in

18



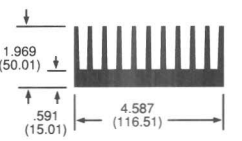
60585 32.0 in²/in 1.7lb/ft 2.2°C/W/3in

19 †



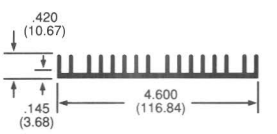
62235 25.1 in²/in 1.3lb/ft 2.8°C/W/3in

20



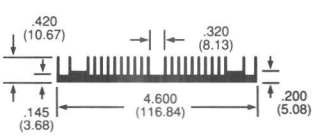
67400* 40.1 in²/in 5.7lb/ft 1.7°C/W/3in

21



65175* 18.1 in²/in 1.1lb/ft 3.9°C/W/3in

22



65995* 21.3 in²/in 1.3lb/ft 3.3°C/W/3in

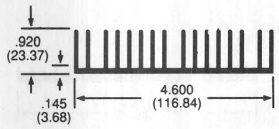
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

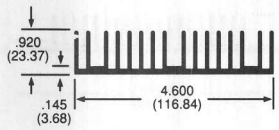
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



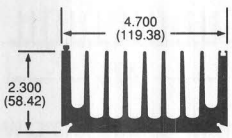
65185* 34.3 in²/in 1.7lb/ft 2.0°C/W/3in

2



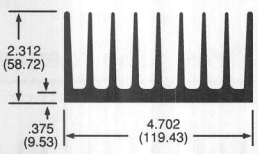
65555* 33.5 in²/in 1.7lb/ft 2.1°C/W/3in

3



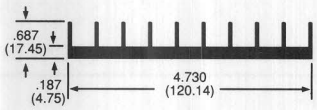
62765 43.9 in²/in 5.2lb/ft 1.5°C/W/3in

4 †



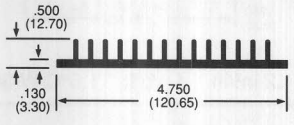
64795 45.0 in²/in 5.7lb/ft 1.6°C/W/3in

5



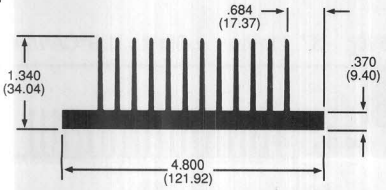
61095 19.8 in²/in 1.7lb/ft 3.5°C/W/3in

6



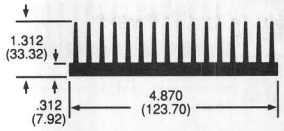
65350 20.1 in²/in 1.0lb/ft 3.5°C/W/3in

7



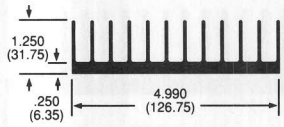
62890* 33.6 in²/in 3.0lb/ft 2.1°C/W/3in

8



62655 42.4 in²/in 3.0lb/ft 1.7°C/W/3in

9

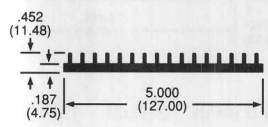


61745 34.5 in²/in 2.4lb/ft 2.0°C/W/3in

Performance vs. Length

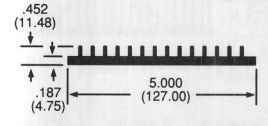
The thermal resistance of a heat sink changes significantly with length. To convert the published natural convection thermal resistance at a 3 inch length to a desired length, see page 5 for a length correction table.

10



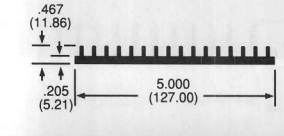
62980 18.9 in²/in 1.4lb/ft 3.7°C/W/3in

11



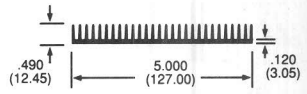
62900* 17.8 in²/in 1.4lb/ft 3.9°C/W/3in

12



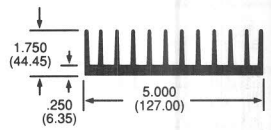
62620* 18.8 in²/in 1.5lb/ft 3.7°C/W/3in

13



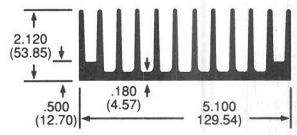
67895* 29.3 in²/in 1.4lb/ft 2.4°C/W/3in

14



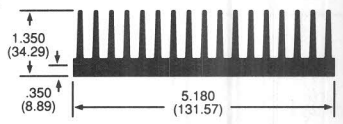
67490* 44.6 in²/in 4.1lb/ft 1.6°C/W/3in

15



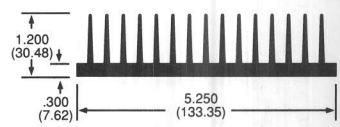
63815 41.7 in²/in 3.9lb/ft 1.7°C/W/3in

16



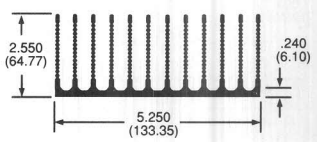
61980 45.1 in²/in 3.5lb/ft 1.6°C/W/3in

17



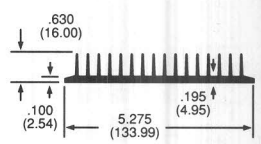
63565 38.1 in²/in 3.2lb/ft 1.8°C/W/3in

18 *Serrated fins*



66425* 73.0 in²/in 4.3lb/ft 1.0°C/W/3in

19



63125 26.0 in²/in 1.8lb/ft 2.7°C/W/3in

20

63495 36.5 in²/in 4.6lb/ft 1.9°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

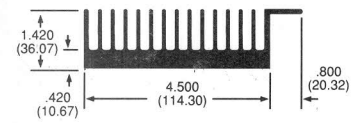
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

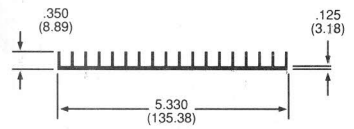
Note: The profiles are not to scale in relation to each other.

1



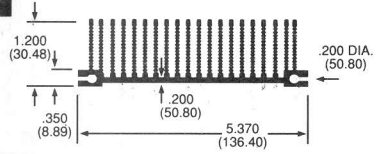
61870 40.3 in^2/in 3.6lb/ft 1.7°C/W/3in

2



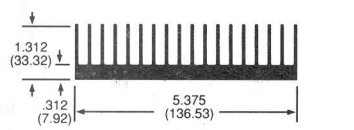
65205* 19.0 in^2/in 1.1lb/ft 3.7°C/W/3in

3



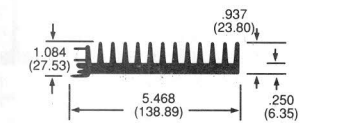
64060 45.8 in^2/in 2.9lb/ft 1.5°C/W/3in

4



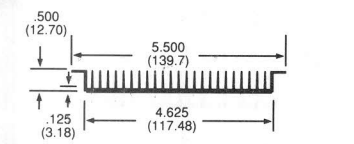
61085 46.1 in^2/in 3.6lb/ft 1.5°C/W/3in

5



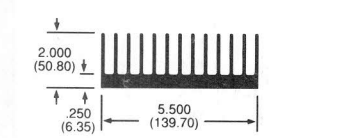
63000 31.0 in^2/in 3.0lb/ft 2.2°C/W/3in

6



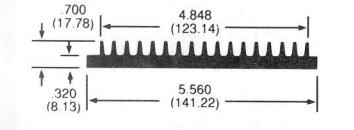
65465 29.0 in^2/in 1.4lb/ft 2.4°C/W/3in

7



64315 57.0 in^2/in 4.3lb/ft 1.2°C/W/3in

8

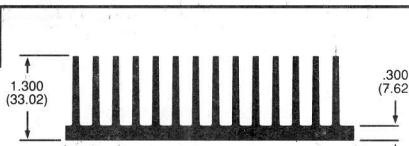


65325 23.9 in^2/in 2.9lb/ft 2.9°C/W/3in

9

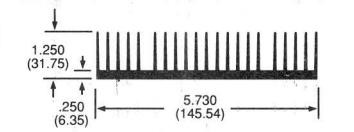
60215 43.6 in^2/in 4.2lb/ft 1.6°C/W/3in

10



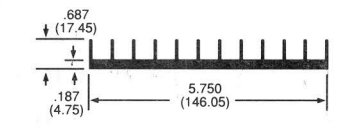
62845* 42.0 in^2/in 3.8lb/ft 1.7°C/W/3in

11



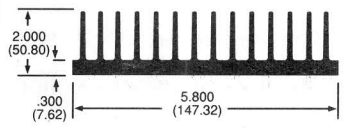
65770 52.5 in^2/in 3.3lb/ft 1.3°C/W/3in

12 †



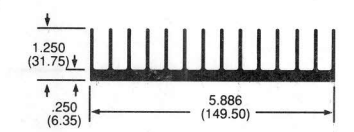
61790 23.9 in^2/in 1.7lb/ft 2.9°C/W/3in

13



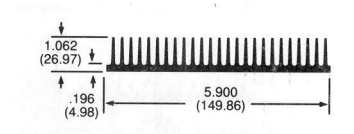
63855* 59.8 in^2/in 5.3lb/ft 1.2°C/W/3in

14



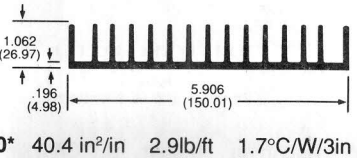
60230 40.0 in^2/in 2.9lb/ft 1.8°C/W/3in

15



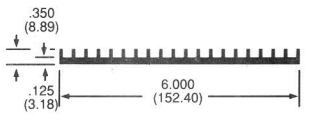
64500* 55.5 in^2/in 3.4lb/ft 1.3°C/W/3in

16



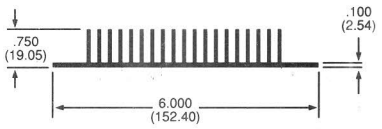
66390* 40.4 in^2/in 2.9lb/ft 1.7°C/W/3in

17



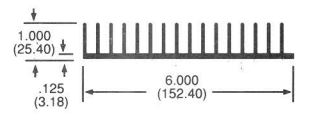
62995* 21.4 in^2/in 1.2lb/ft 3.3°C/W/3in

18



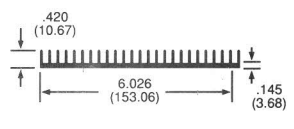
66955* 36.7 in^2/in 1.6lb/ft 1.9°C/W/3in

19



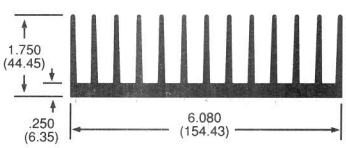
62440* 40.1 in^2/in 1.7lb/ft 1.8°C/W/3in

20



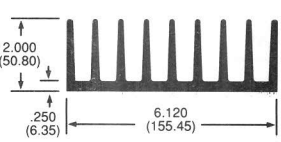
65400* 25.3 in^2/in 1.5lb/ft 2.8°C/W/3in

21



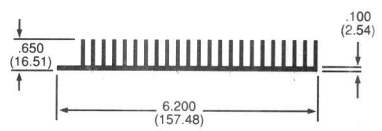
60140 50.3 in^2/in 4.1lb/ft 1.4°C/W/3in

22



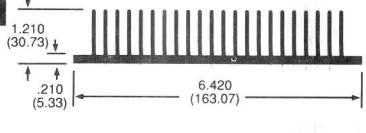
64225* 44.2 in^2/in 4.4lb/ft 1.6°C/W/3in

23



66690* 37.7 in^2/in 1.6lb/ft 1.9°C/W/3in

24



64360* 57.3 in^2/in 3.2lb/ft 1.2°C/W/3in

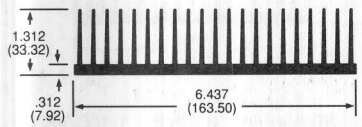
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

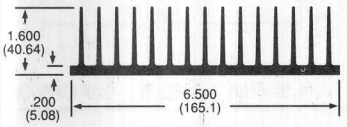
Key:
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



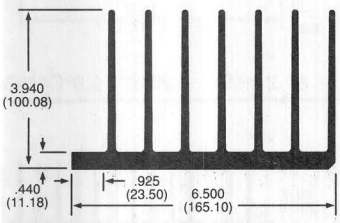
60340 55.5 in²/in 3.2lb/ft 1.2°C/W/3in

2



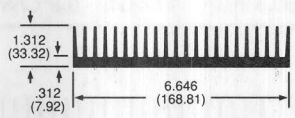
61070 56.0 in²/in 3.4lb/ft 1.3°C/W/3in

3 †



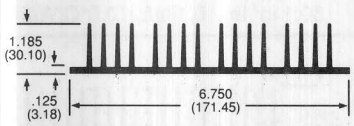
62515* 61.4 in²/in 7.4lb/ft 1.1°C/W/3in

4



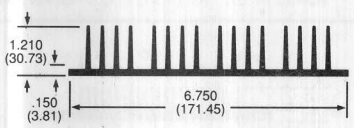
62155 55.5 in²/in 4.6lb/ft 1.3°C/W/3in

5



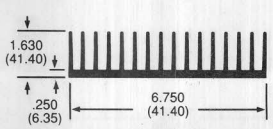
60955 51.0 in²/in 2.5lb/ft 1.4°C/W/3in

6



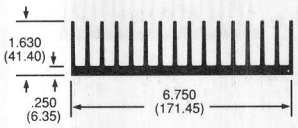
61710* 46.7 in²/in 2.9lb/ft 1.5°C/W/3in

7



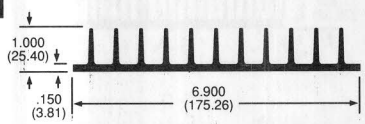
62060 58.2 in²/in 4.6lb/ft 1.2°C/W/3in

8



62285 56.9 in²/in 4.1lb/ft 1.2°C/W/3in

9

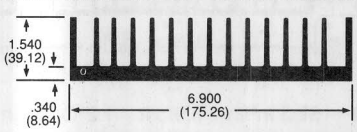


61505 24.3 in²/in 2.4lb/ft 2.9°C/W/3in

Temperature Rise Factor

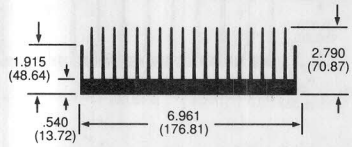
The published thermal resistance assumes a 75° C temperature rise of the heat sink above the ambient temperature. To determine the thermal resistance in natural convection for other temperature rises, see page 4 for a temperature correction table.

10



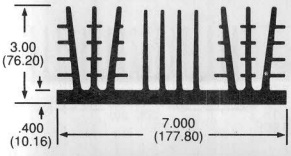
61830 48.3 in²/in 4.8lb/ft 1.6°C/W/3in

11



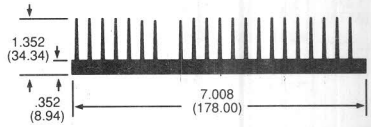
65605 97.9 in²/in 9.3lb/ft 0.7°C/W/3in

12



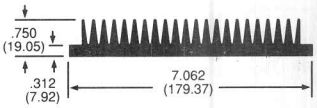
62260 76.5 in²/in 8.1lb/ft 0.9°C/W/3in

13



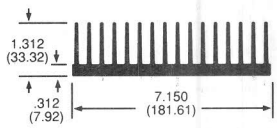
61825 56.0 in²/in 3.6lb/ft 1.3°C/W/3in

14



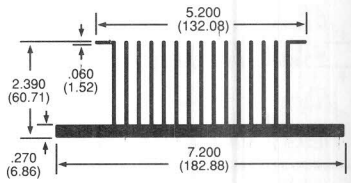
62510* 44.5 in²/in 5.1lb/ft 1.6°C/W/3in

15



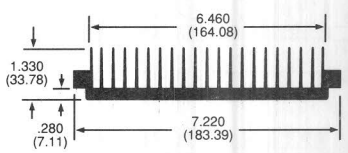
62660 60.6 in²/in 4.6lb/ft 1.2°C/W/3in

16



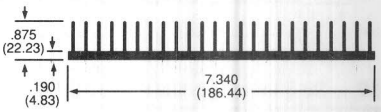
62625 78.2 in²/in 4.7lb/ft 0.9°C/W/3in

17



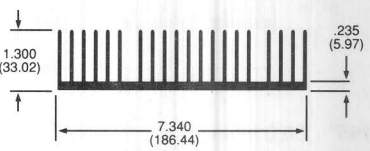
67805* 58.0 in²/in 4.4lb/ft 1.2°C/W/3in

18



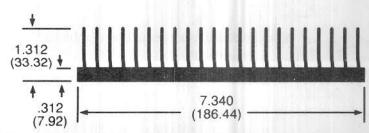
61915 47.9 in²/in 2.9lb/ft 1.5°C/W/3in

19



66815* 56.9 in²/in 3.7lb/ft 1.2°C/W/3in

20



65445 62.6 in²/in 4.8lb/ft 1.1°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

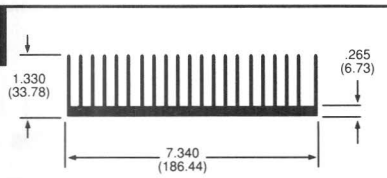
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
C/W/3"	1.02	C/W/75mm

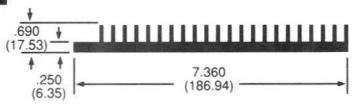
Note: The profiles are not to scale in relation to each other.

1



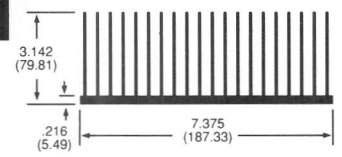
66880 59.1 in^2/in 4.1lb/ft 1.2°C/W/3in

2



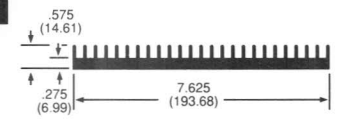
62280* 34.5 in^2/in 3.1lb/ft 2.0°C/W/3in

3



67690* 129.6 in^2/in 6.6lb/ft 0.5°C/W/3in

4

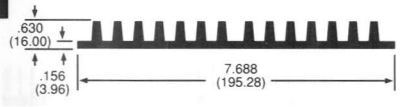


63350 29.4 in^2/in 3.1lb/ft 2.4°C/W/3in

5

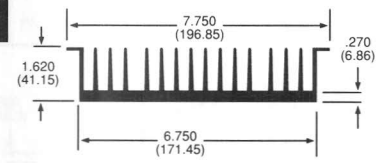
61880 62.1 in^2/in 5.3lb/ft 1.1°C/W/3in

6



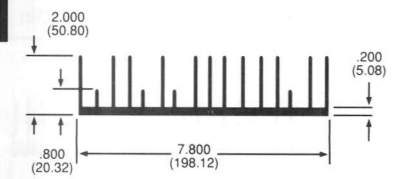
60910 28.5 in^2/in 3.1lb/ft 2.5°C/W/3in

7



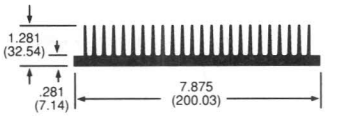
64145* 56.0 in^2/in 5.4lb/ft 1.3°C/W/3in

8



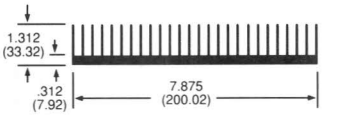
62080* 63.0 in^2/in 4.1lb/ft 1.1°C/W/3in

9



63745 62.0 in^2/in 4.7lb/ft 1.1°C/W/3in

10

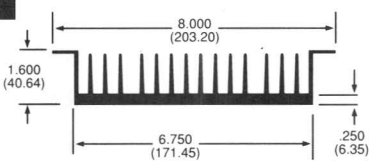


63925 66.5 in^2/in 5.2lb/ft 1.1°C/W/3in

11

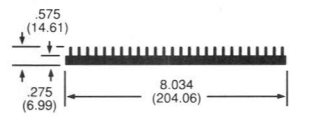
61515* 40.3 in^2/in 2.8lb/ft 1.7°C/W/3in

12



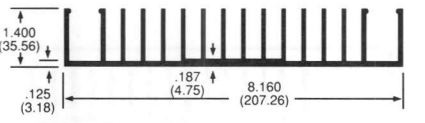
65210 56.5 in^2/in 5.3lb/ft 1.2°C/W/3in

13



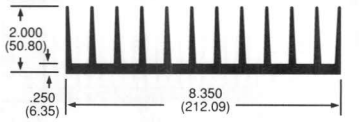
62805 32.2 in^2/in 3.1lb/ft 2.2°C/W/3in

14



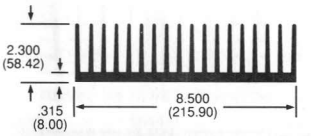
61580 57.3 in^2/in 3.9lb/ft 1.2°C/W/3in

15



60815 56.8 in^2/in 6.0lb/ft 1.2°C/W/3in

16

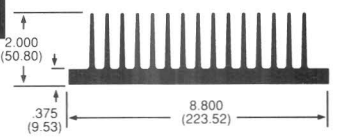


65345 86.3 in^2/in 9.0lb/ft 0.8°C/W/3in

17

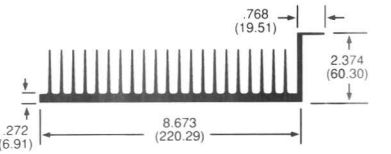
65515 59.5 in^2/in 6.3lb/ft 1.1°C/W/3in

18



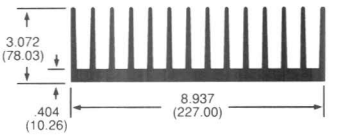
65575 74.3 in^2/in 9.6lb/ft 0.9°C/W/3in

19



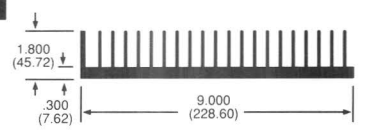
64115 80.2 in^2/in 6.2lb/ft 0.9°C/W/3in

20



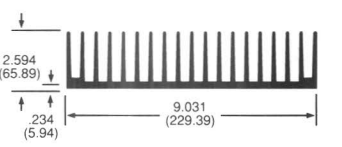
65530 90.5 in^2/in 12.4lb/ft 0.8°C/W/3in

21 †



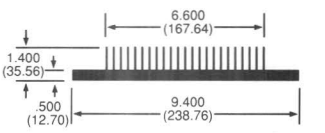
65440 80.1 in^2/in 6.1lb/ft 0.9°C/W/3in

22



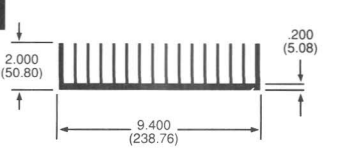
65615 104.5 in^2/in 9.0lb/ft 0.7°C/W/3in

23



65335 59.7 in^2/in 7.3lb/ft 1.2°C/W/3in

24



66480* 75.6 in^2/in 5.6lb/ft 0.9°C/W/3in

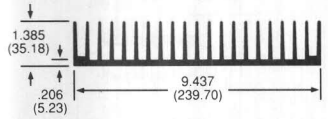
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

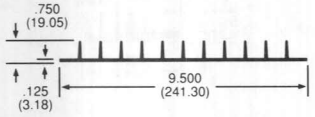
Key:
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



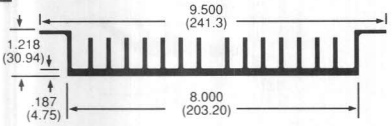
65520 66.4 in²/in 4.5lb/ft 1.1°C/W/3in

2



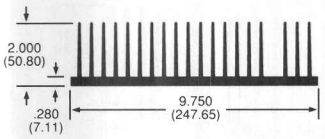
63390* 32.2 in²/in 2.0lb/ft 2.2°C/W/3in

3



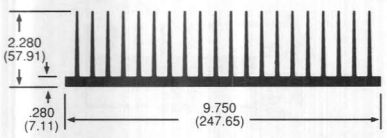
61665 47.1 in²/in 3.7lb/ft 1.4°C/W/3in

4



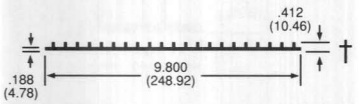
64615* 93.8 in²/in 7.0lb/ft 0.7°C/W/3in

5 †



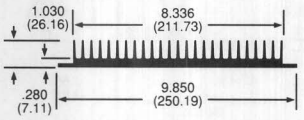
62725 100.1 in²/in 7.1lb/ft 0.7°C/W/3in

6



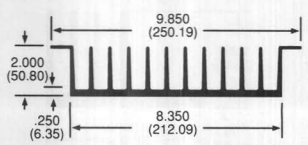
† **64025*** 39.4 in²/in 2.8lb/ft 1.8°C/W/3in

7



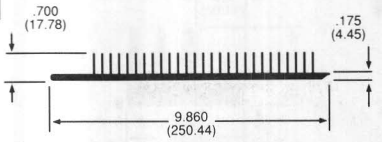
63175 57.2 in²/in 5.3lb/ft 1.2°C/W/3in

8



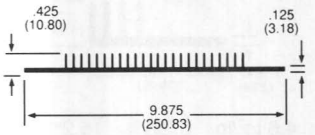
62185 62.2 in²/in 5.8lb/ft 1.1°C/W/3in

9



64475 48.4 in²/in 3.1lb/ft 1.4°C/W/3in

10

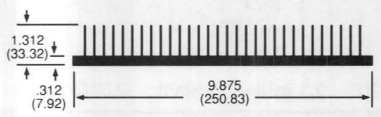


64520* 35.0 in²/in 2.0lb/ft 2.0°C/W/3in

Optimization

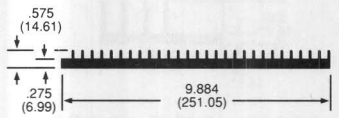
Optimization in either forced or natural convection can result in cost and size reduction of the heat sink. In forced convection, optimization can reduce the size of the fan or blower. See page 4 for more information concerning optimization.

11



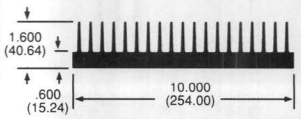
60520 80.4 in²/in 6.7lb/ft 0.9°C/W/3in

12



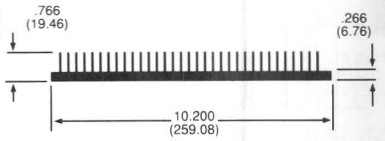
61780 38.3 in²/in 4.1lb/ft 1.8°C/W/3in

13



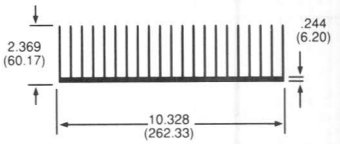
63700* 56.1 in²/in 9.7lb/ft 1.2°C/W/3in

14



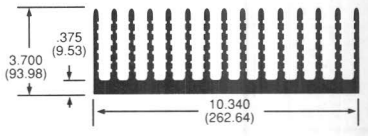
67010* 53.3 in²/in 5.1lb/ft 1.3°C/W/3in

15



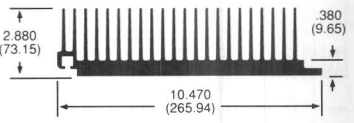
65525 108.9 in²/in 8.1lb/ft 0.6°C/W/3in

16 *Serrated fins*



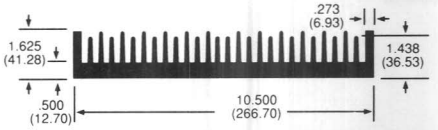
68290* 151.7 in²/in 13.9lb/ft 0.5°C/W/3in

17



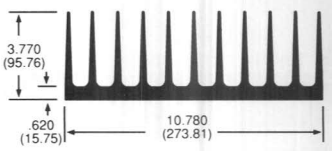
65670* 128.6 in²/in 10.3lb/ft 0.5°C/W/3in

18 *Serrated fins*



62325 85.3 in²/in 10.6lb/ft 0.8°C/W/3in

19 †

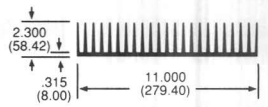


61785 92.1 in²/in 16.4lb/ft 0.8°C/W/3in

20 †

65620 102.7 in²/in 9.9lb/ft 0.7°C/W/3in

21



65340 110.4 in²/in 11.8lb/ft 0.6°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

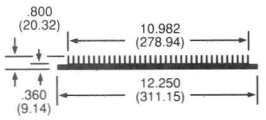
Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
C/W/3"	1.02	C/W/75mm

Note: The profiles are not to scale in relation to each other.

1

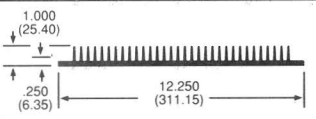
65535 115.7 in^2/in 11.3lb/ft 0.6°C/W/3in

2 †



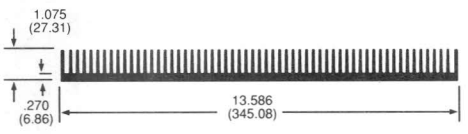
63650* 56.3 in^2/in 6.3lb/ft 1.2°C/W/3in

3



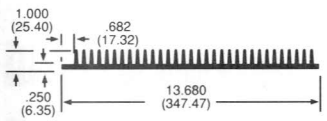
61155 73.0 in^2/in 5.5lb/ft 1.0°C/W/3in

4 †



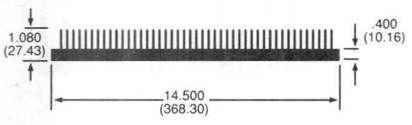
65095* 54.6 in^2/in 8.5lb/ft 1.3°C/W/3in

5



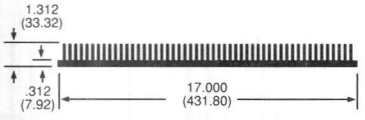
62645 75.9 in^2/in 8.7lb/ft 0.9°C/W/3in

6 †



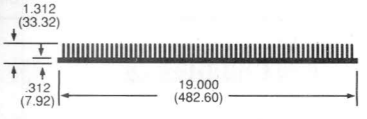
64080* 88.6 in^2/in 11.5lb/ft 0.8°C/W/3in

7



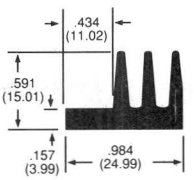
63340 136.6 in^2/in 10.4lb/ft 0.5°C/W/3in

8



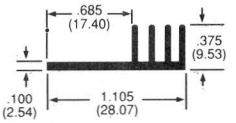
62335 160.6 in^2/in 11.6lb/ft 0.4°C/W/3in

9



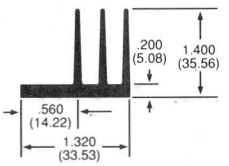
63200* 4.9 in^2/in 0.4lb/ft 14.0°C/W/3in

10



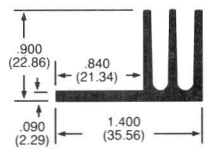
63555* 4.6 in^2/in 0.2lb/ft 15.2°C/W/3in

11



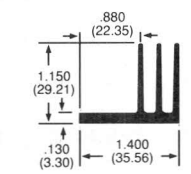
62915* 10.2 in^2/in 0.6lb/ft 6.9°C/W/3in

12



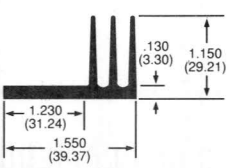
63380* 7.8 in^2/in 3.5lb/ft 9.5°C/W/3in

13



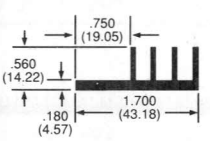
61320* 9.0 in^2/in 0.5lb/ft 8.0°C/W/3in

14



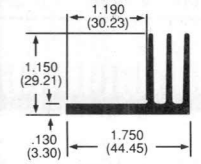
66330* 9.1 in^2/in 0.5lb/ft 7.7°C/W/3in

15



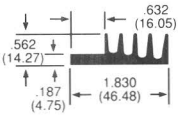
63545* 6.8 in^2/in 0.5lb/ft 10.3°C/W/3in

16



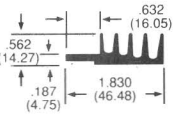
61530 9.9 in^2/in 0.5lb/ft 7.1°C/W/3in

17



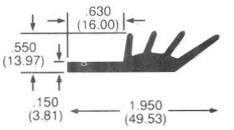
61590* 8.1 in^2/in 0.5lb/ft 8.6°C/W/3in

18



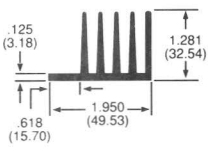
65980* 7.5 in^2/in 0.5lb/ft 9.3°C/W/3in

19



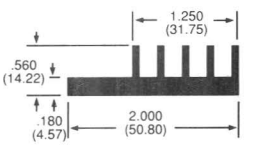
65285* 6.1 in^2/in 0.5lb/ft 11.5°C/W/3in

20



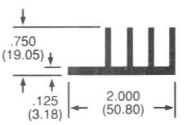
61975* 15.7 in^2/in 0.9lb/ft 4.4°C/W/3in

21



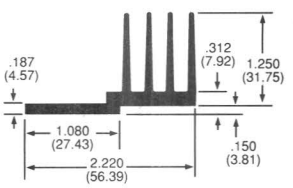
62385 8.2 in^2/in 0.6lb/ft 9.0°C/W/3in

22



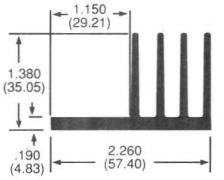
64695* 10.5 in^2/in 0.5lb/ft 6.7°C/W/3in

23



62920 12.6 in^2/in 0.9lb/ft 5.6°C/W/3in

24



61325 14.5 in^2/in 1.0lb/ft 4.8°C/W/3in

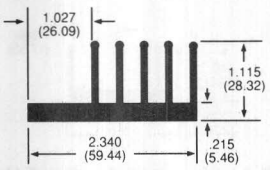
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

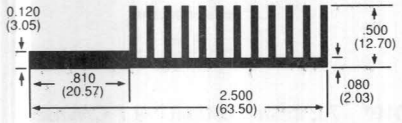
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



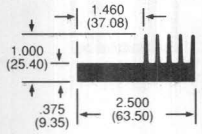
66820* 13.9 in²/in 0.9lb/ft 5.0°C/W/3in

2



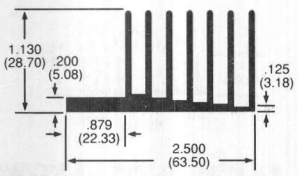
66535* 15.2 in²/in 0.6lb/ft 4.6°C/W/3in

3



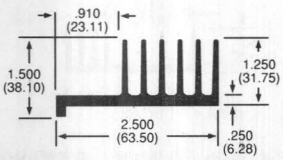
63215* 12.0 in²/in 1.4lb/ft 5.8°C/W/3in

4



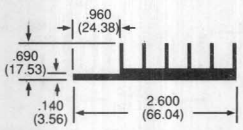
65565 18.9 in²/in 1.3lb/ft 3.7°C/W/3in

5



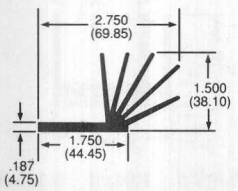
64685* 18.0 in²/in 1.6lb/ft 3.9°C/W/3in

6



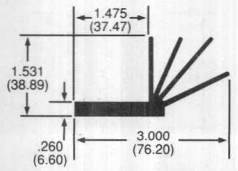
65295 11.0 in²/in 0.9lb/ft 6.4°C/W/3in

7



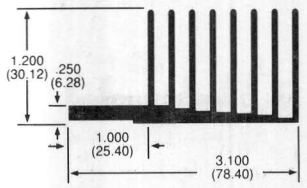
61875 15.8 in²/in 1.0lb/ft 4.4°C/W/3in

8



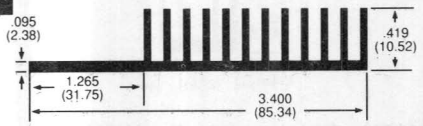
60695* 15.5 in²/in 1.0lb/ft 4.5°C/W/3in

9



65560 22.2 in²/in 1.5lb/ft 3.2°C/W/3in

10

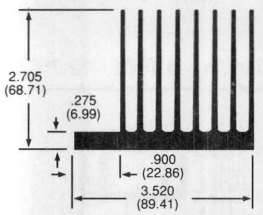


66540* 14.6 in²/in 0.7lb/ft 4.8°C/W/3in

Technical Capabilities

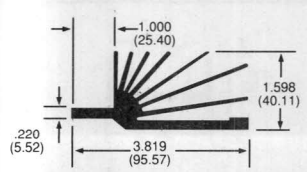
Aavid Engineering's application engineering department has the capability to perform a full thermal analysis, including optimization, in order to find the right Aavid heat sink for your application. Please refer to the Request for Information sheets on pages 64 and 65.

11



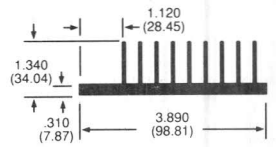
62580* 46.5 in²/in 3.1lb/ft 1.5°C/W/3in

12



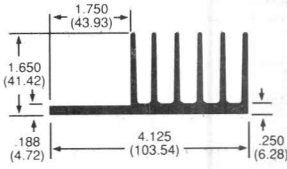
65500 27.0 in²/in 2.3lb/ft 2.6°C/W/3in

13



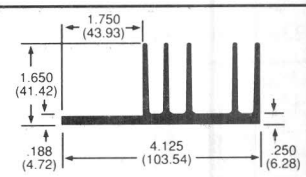
64590* 27.0 in²/in 2.1lb/ft 2.6°C/W/3in

14



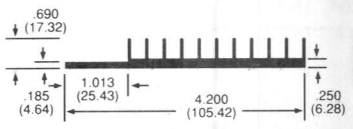
61685* 25.6 in²/in 2.7lb/ft 4.3°C/W/3in

15



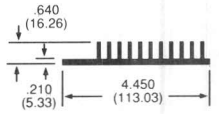
63410* 23.2 in²/in 2.5lb/ft 3.0°C/W/3in

16



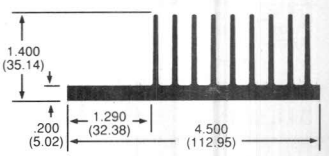
64540* 18.6 in²/in 1.5lb/ft 3.8°C/W/3in

17



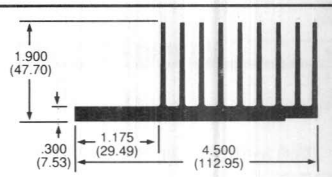
65050* 14.5 in²/in 1.6lb/ft 4.8°C/W/3in

18



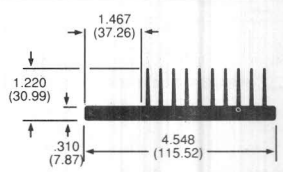
62255* 31.0 in²/in 2.1lb/ft 2.3°C/W/3in

19



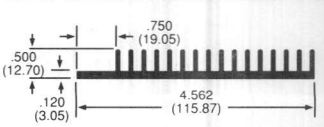
66005* 37.9 in²/in 3.8lb/ft 1.8°C/W/3in

20



61485 27.9 in²/in 2.4lb/ft 2.5°C/W/3in

21



61285 21.5 in²/in 1.1lb/ft 3.2°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

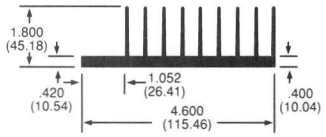
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

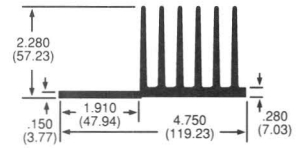
Note: The profiles are not to scale in relation to each other.

1



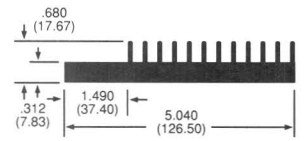
66555 34.4 in^2/in 3.3lb/ft 2.0°C/W/3in

2



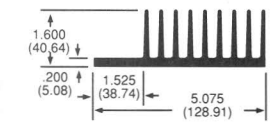
65680* 33.2 in^2/in 2.4lb/ft 2.1°C/W/3in

3



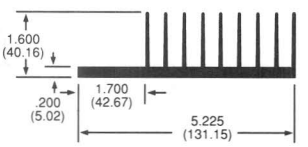
62880* 19.5 in^2/in 2.3lb/ft 3.6°C/W/3in

4



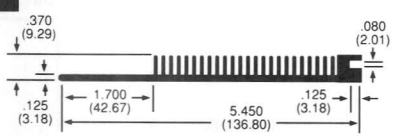
62630* 45.8 in^2/in 2.4lb/ft 1.5°C/W/3in

5



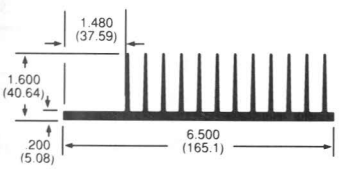
66485* 34.6 in^2/in 2.4lb/ft 2.0°C/W/3in

6



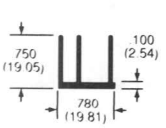
65955* 23.6 in^2/in 1.3lb/ft 3.0°C/W/3in

7



62045 47.0 in^2/in 3.2lb/ft 1.5°C/W/3in

8

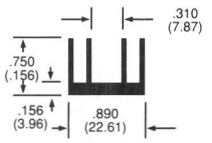


63225* 4.4 in^2/in 0.2lb/ft 15.9°C/W/3in

9

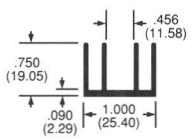
62525* 2.5 in^2/in 0.1lb/ft 28.0°C/W/3in

10



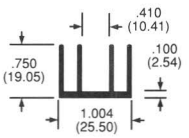
64170* 6.8 in^2/in 0.3lb/ft 10.2°C/W/3in

11



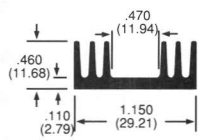
62950* 7.5 in^2/in 0.7lb/ft 9.3°C/W/3in

12



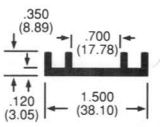
63230 7.4 in^2/in 0.3lb/ft 9.5°C/W/3in

13



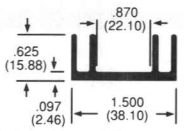
62365 6.8 in^2/in 0.3lb/ft 10.5°C/W/3in

14



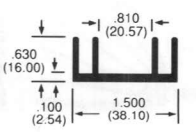
60185* 5.5 in^2/in 0.4lb/ft 12.7°C/W/3in

15



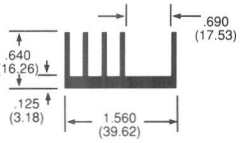
61355* 7.5 in^2/in 0.4lb/ft 9.4°C/W/3in

16



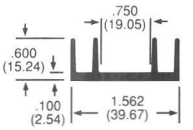
61180* 7.4 in^2/in 0.4lb/ft 9.5°C/W/3in

17



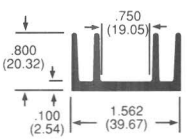
65390 9.6 in^2/in 0.5lb/ft 7.3°C/W/3in

18



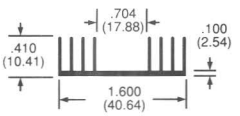
60010* 7.2 in^2/in 0.4lb/ft 9.7°C/W/3in

19



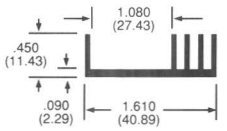
60015* 8.9 in^2/in 0.4lb/ft 7.9°C/W/3in

20



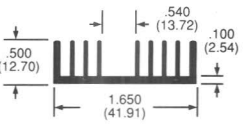
66410* 8.2 in^2/in 0.3lb/ft 8.5°C/W/3in

21



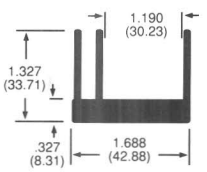
67420* 7.4 in^2/in 0.3lb/ft 9.5°C/W/3in

22



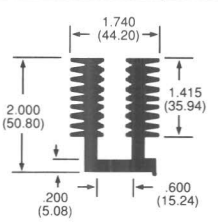
67800* 8.9 in^2/in 0.4lb/ft 7.9°C/W/3in

23



60705* 11.5 in^2/in 1.0lb/ft 6.1°C/W/3in

24



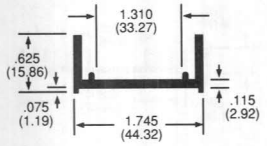
65685* 24.4 in^2/in 1.8lb/ft 2.9°C/W/3in

AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

Note: The profiles are not to scale in relation to each other.

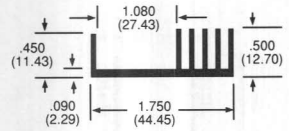
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



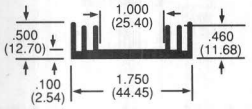
67220* 6.1 in²/in 0.3lb/ft 11.5°C/W/3in

2



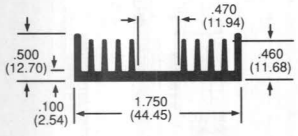
66315* 8.5 in²/in 0.3lb/ft 8.2°C/W/3in

3



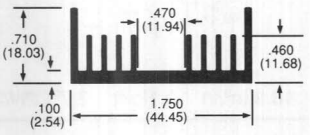
60950* 8.0 in²/in 0.4lb/ft 8.8°C/W/3in

4



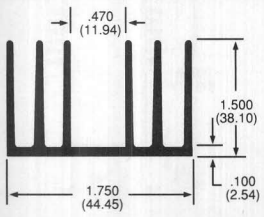
62300 11.1 in²/in 0.5lb/ft 6.3°C/W/3in

5



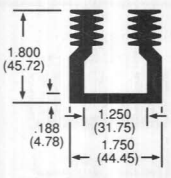
61770* 11.9 in²/in 0.5lb/ft 5.8°C/W/3in

6



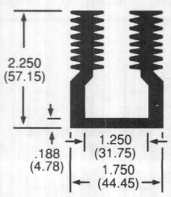
63065* 19.9 in²/in 0.9lb/ft 3.5°C/W/3in

7



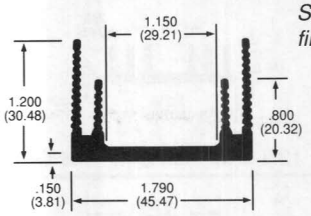
61435 22.0 in²/in 1.6lb/ft 3.1°C/W/3in

8



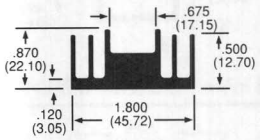
60180 27.5 in²/in 2.1lb/ft 2.3°C/W/3in

9 *Serrated fins*



62955* 11.0 in²/in 0.7lb/ft 6.4°C/W/3in

10

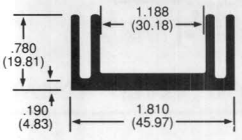


61890* 11.3 in²/in 0.9lb/ft 6.2°C/W/3in

Fabrication Capabilities

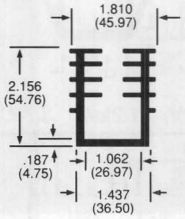
Aavid has extensive manufacturing capabilities for the complete fabrication of heat sinks from extrusions. The Aavid plant is equipped with high speed saws, a battery of CNC machining centers, and an automated anodizing line - incorporating the latest technology available in the world.

11



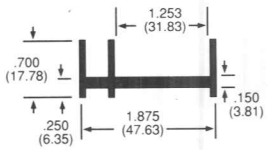
62090* 9.0 in²/in 1.7lb/ft 7.8°C/W/3in

12



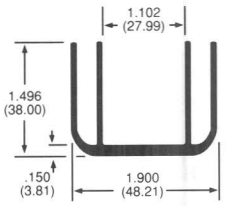
61725* 20.2 in²/in 1.5lb/ft 3.5°C/W/3in

13



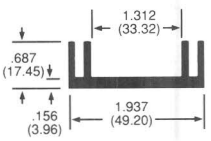
61000* 7.4 in²/in 0.5lb/ft 9.5°C/W/3in

14



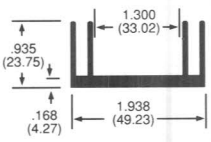
62210 14.9 in²/in 0.7lb/ft 4.7°C/W/3in

15



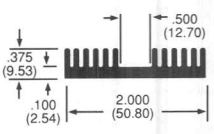
60690* 8.4 in²/in 0.6lb/ft 8.3°C/W/3in

16



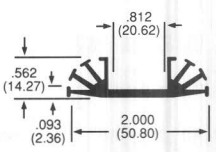
61170 10.4 in²/in 0.6lb/ft 6.7°C/W/3in

17



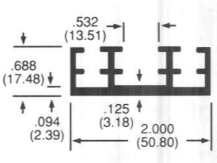
61420* 10.8 in²/in 0.5lb/ft 6.5°C/W/3in

18



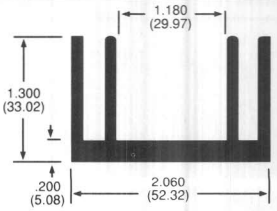
60070* 10.0 in²/in 0.4lb/ft 7.0°C/W/3in

19



60920 11.5 in²/in 0.6lb/ft 6.1°C/W/3in

20



62245* 13.3 in²/in 1.0lb/ft 5.3°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

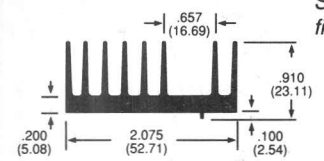
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

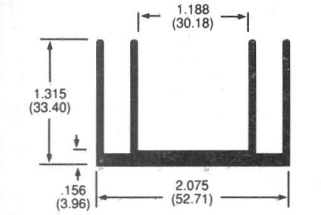
Note: The profiles are not to scale in relation to each other.

1 *Serrated fins*



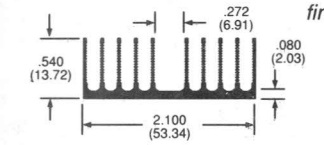
67275* 13.6 in^2/in 1.0lb/ft 5.1°C/W/3in

2



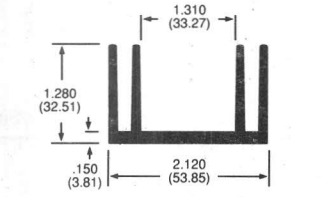
62355 13.6 in^2/in 0.7lb/ft 5.2°C/W/3in

3 *Serrated fins*



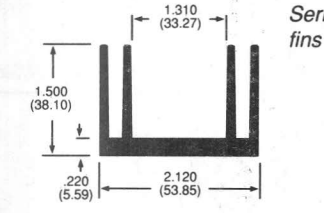
66435 16.1 in^2/in 0.5lb/ft 4.3°C/W/3in

4



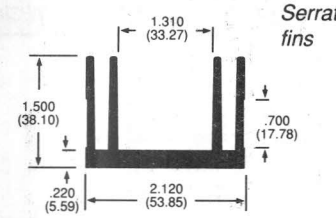
61920* 13.7 in^2/in 0.7lb/ft 5.1°C/W/3in

5 *Serrated fins*



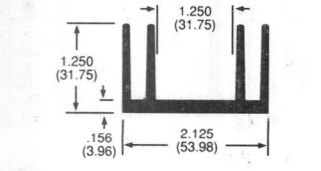
62215 22.5 in^2/in 1.1lb/ft 3.7°C/W/3in

6 *Serrated fins*



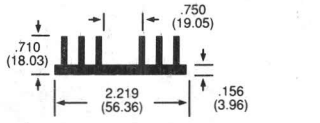
65140 22.5 in^2/in 1.1lb/ft 3.1°C/W/3in

7



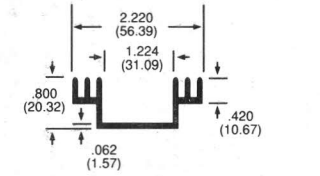
61260 13.3 in^2/in 0.9lb/ft 5.3°C/W/3in

8



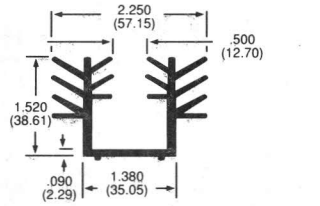
62485* 12.5 in^2/in 0.7lb/ft 5.6°C/W/3in

9



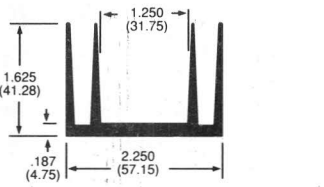
61755* 10.3 in^2/in 0.5lb/ft 6.8°C/W/3in

10



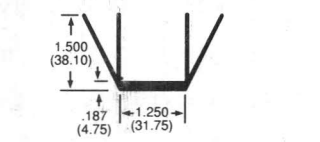
61190* 20.1 in^2/in 0.9lb/ft 3.5°C/W/3in

11



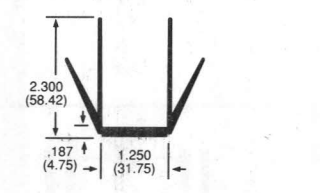
61375 16.7 in^2/in 1.1lb/ft 4.2°C/W/3in

12



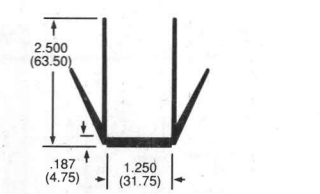
60495 13.0 in^2/in 0.9lb/ft 5.4°C/W/3in

13



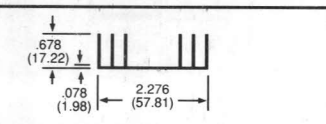
65410 17.5 in^2/in 1.0lb/ft 4.0°C/W/3in

14



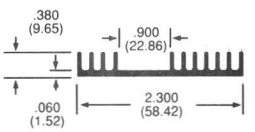
60125 19.0 in^2/in 1.2lb/ft 3.7°C/W/3in

15



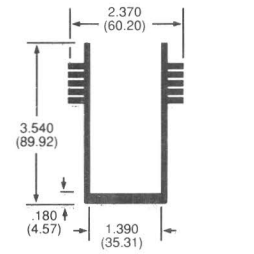
64815 12.0 in^2/in 0.6lb/ft 5.8°C/W/3in

16



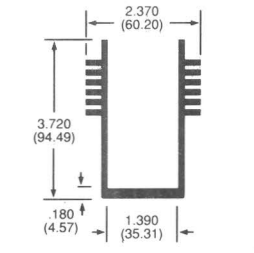
64645 11.8 in^2/in 0.3lb/ft 5.9°C/W/3in

17



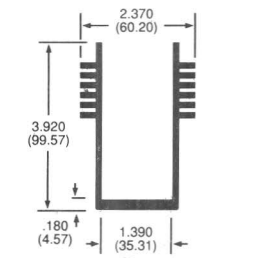
62010* 23.9 in^2/in 1.9lb/ft 3.2°C/W/3in

18



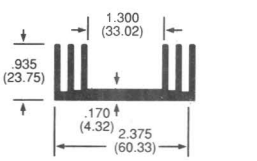
62250* 18.9 in^2/in 2.1lb/ft 3.7°C/W/3in

19



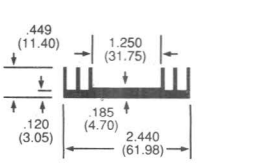
62005* 20.0 in^2/in 2.3lb/ft 3.5°C/W/3in

20



62220 14.6 in^2/in 0.9lb/ft 4.8°C/W/3in

21



63425* 8.3 in^2/in 0.6lb/ft 8.4°C/W/3in

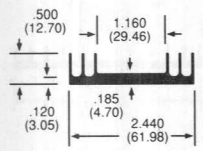
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

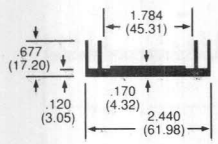
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



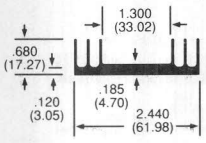
63190* 9.6 in²/in 0.6lb/ft 7.3°C/W/3in

2



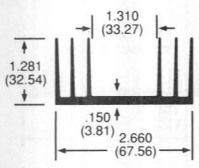
63430 9.7 in²/in 0.6lb/ft 7.2°C/W/3in

3



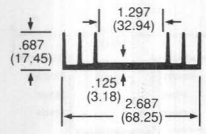
60985 11.5 in²/in 0.8lb/ft 6.1°C/W/3in

4



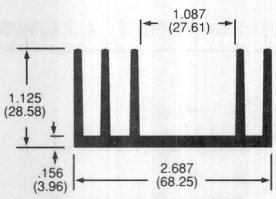
61065* 19.4 in²/in 1.0lb/ft 3.6°C/W/3in

5



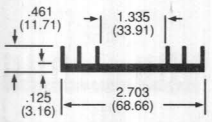
60865 13.6 in²/in 0.5lb/ft 5.1°C/W/3in

6



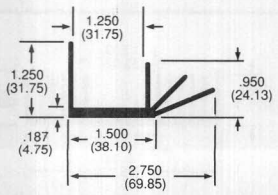
60605* 16.6 in²/in 0.9lb/ft 4.2°C/W/3in

7



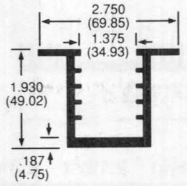
61415* 9.7 in²/in 0.6lb/ft 5.1°C/W/3in

8



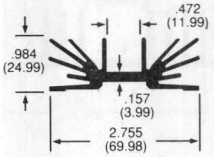
63560 11.5 in²/in 0.7lb/ft 6.1°C/W/3in

9



63315 15.4 in²/in 1.1lb/ft 4.1°C/W/3in

10

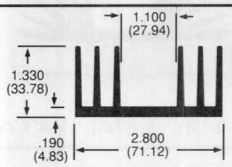


63205* 23.2 in²/in 1.3lb/ft 3.0°C/W/3in

Performance vs. Length

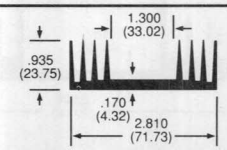
The thermal resistance of a heat sink changes significantly with length. To convert the published natural convection thermal resistance at a 3 inch length to a desired length, see page 5 for a length correction table.

11



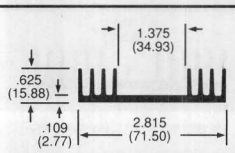
61390 19.7 in²/in 1.1lb/ft 3.5°C/W/3in

12



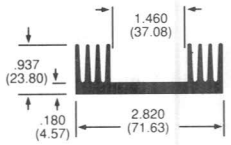
61040 18.4 in²/in 1.1lb/ft 3.8°C/W/3in

13



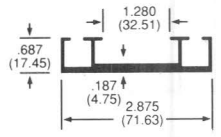
60235* 14.4 in²/in 0.8lb/ft 4.8°C/W/3in

14



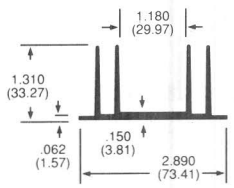
61225 18.2 in²/in 1.2lb/ft 3.8°C/W/3in

15



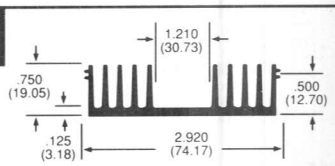
60510 10.9 in²/in 0.9lb/ft 6.4°C/W/3in

16



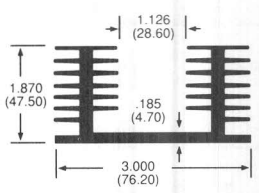
60855* 17.0 in²/in 0.8lb/ft 4.1°C/W/3in

17



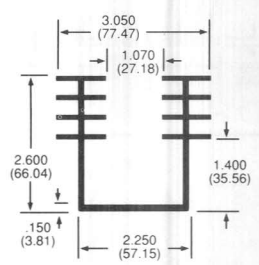
62975* 18.0 in²/in 1.1lb/ft 3.9°C/W/3in

18



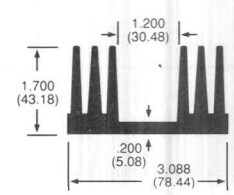
64335 30.6 in²/in 2.5lb/ft 2.3°C/W/3in

19



66325* 26.9 in²/in 2.2lb/ft 2.6°C/W/3in

20



60625 23.5 in²/in 2.8lb/ft 3.0°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

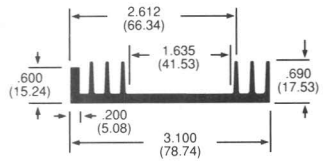
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
C/W/3"	1.02	C/W/75mm

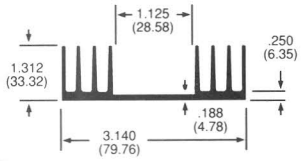
Note: The profiles are not to scale in relation to each other.

1



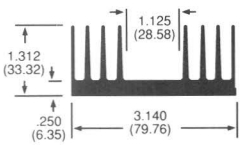
62540* 13.3 in^2/in 0.9lb/ft 5.3°C/W/3in

2



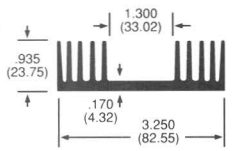
64835 24.0 in^2/in 1.7lb/ft 2.9°C/W/3in

3



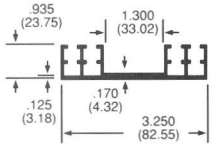
61455* 23.8 in^2/in 1.8lb/ft 2.9°C/W/3in

4



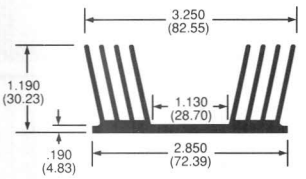
61035 22.4 in^2/in 1.2lb/ft 3.1°C/W/3in

5



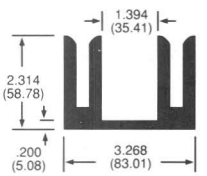
65150* 18.7 in^2/in 1.0lb/ft 3.7°C/W/3in

6



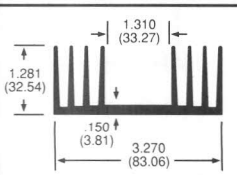
62095* 21.7 in^2/in 1.3lb/ft 3.2°C/W/3in

7



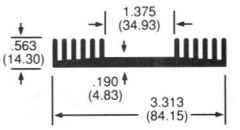
63280 18.4 in^2/in 4.2lb/ft 3.8°C/W/3in

8



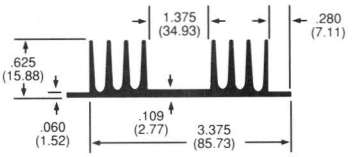
61060 24.9 in^2/in 1.2lb/ft 2.6°C/W/3in

9



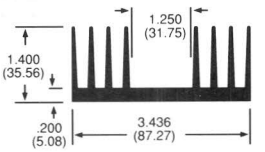
64950* 11.1 in^2/in 2.1lb/ft 6.3°C/W/3in

10



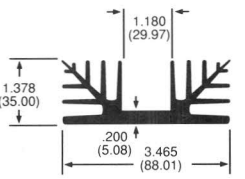
60020* 15.1 in^2/in 0.8lb/ft 4.6°C/W/3in

11



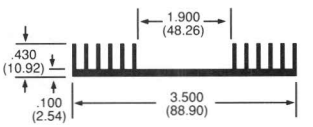
61055 26.5 in^2/in 1.9lb/ft 2.5°C/W/3in

12



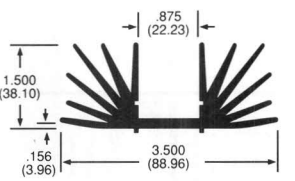
65705 28.0 in^2/in 1.9lb/ft 2.5°C/W/3in

13



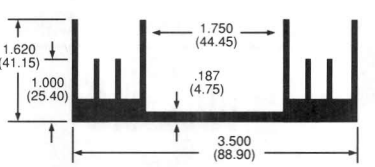
67375* 15.0 in^2/in 0.6lb/ft 4.7°C/W/3in

14



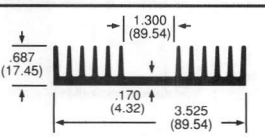
65540* 29.5 in^2/in 1.8lb/ft 2.4°C/W/3in

15



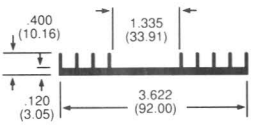
65695 23.4 in^2/in 1.8lb/ft 3.0°C/W/3in

16



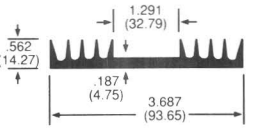
62810* 18.8 in^2/in 1.1lb/ft 3.7°C/W/3in

17



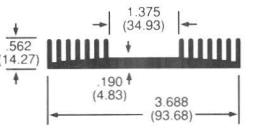
60555* 12.5 in^2/in 0.7lb/ft 5.6°C/W/3in

18



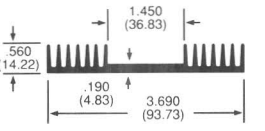
60110* 14.7 in^2/in 1.1lb/ft 4.8°C/W/3in

19



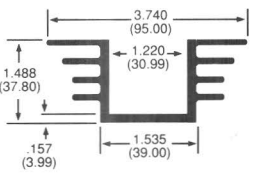
60725 20.0 in^2/in 1.2lb/ft 3.5°C/W/3in

20



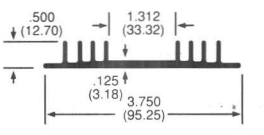
64280* 17.6 in^2/in 1.2lb/ft 4.0°C/W/3in

21



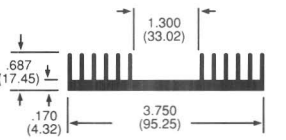
61810* 16.8 in^2/in 1.5lb/ft 4.2°C/W/3in

22



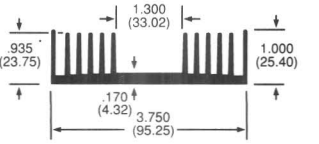
60675* 14.7 in^2/in 0.9lb/ft 4.7°C/W/3in

23



61045 20.3 in^2/in 1.1lb/ft 3.4°C/W/3in

24



60935* 27.2 in^2/in 1.6lb/ft 2.6°C/W/3in

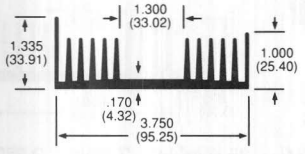
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

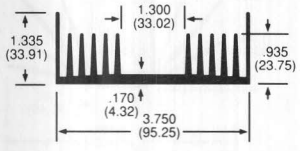
Note: The profiles are not to scale in relation to each other.

1 †



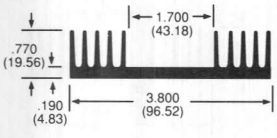
60570 27.8 in²/in 1.9lb/ft 2.6°C/W/3in

2 †



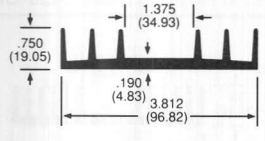
61795* 27.5 in²/in 1.4lb/ft 2.6°C/W/3in

3



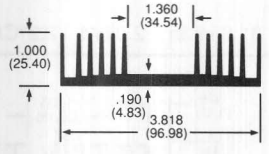
64260* 18.5 in²/in 1.4lb/ft 3.8°C/W/3in

4



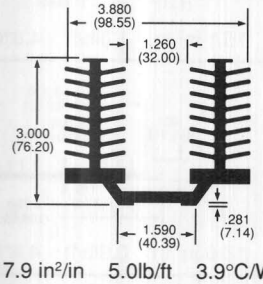
60850 15.0 in²/in 1.3lb/ft 4.6°C/W/3in

5



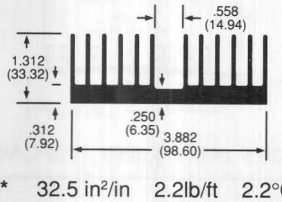
61575 28.1 in²/in 1.7lb/ft 2.5°C/W/3in

6



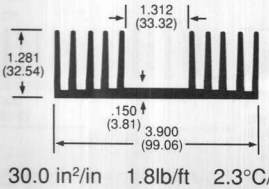
62550* 17.9 in²/in 5.0lb/ft 3.9°C/W/3in

7



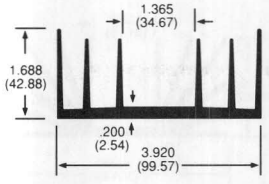
61850* 32.5 in²/in 2.2lb/ft 2.2°C/W/3in

8



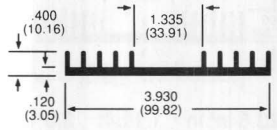
60630 30.0 in²/in 1.8lb/ft 2.3°C/W/3in

9



61050 25.0 in²/in 1.6lb/ft 2.0°C/W/3in

10

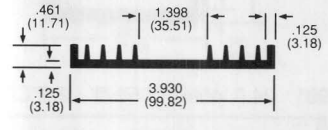


60170* 13.7 in²/in 0.8lb/ft 5.1°C/W/3in

Temperature Rise Factor

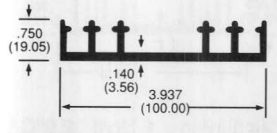
The published thermal resistance assumes a 75° C temperature rise of the heat sink above the ambient temperature. To determine the thermal resistance in natural convection for other temperature rises, see page 4 for a temperature correction table.

11



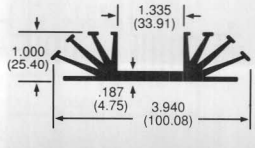
60005 14.8 in²/in 0.9lb/ft 4.7°C/W/3in

12 *Serrated fins*



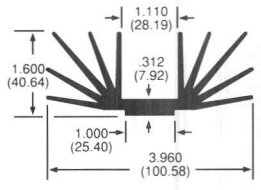
60395* 19.0 in²/in 1.0lb/ft 3.7°C/W/3in

13



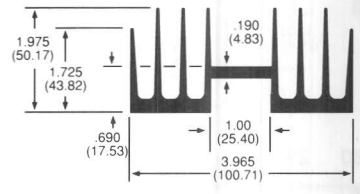
61985 23.0 in²/in 1.2lb/ft 3.0°C/W/3in

14



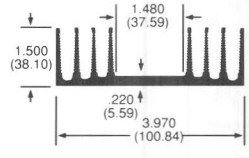
60150* 31.5 in²/in 1.6lb/ft 2.2°C/W/3in

15



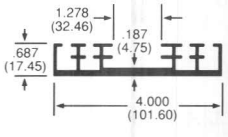
62265* 33.5 in²/in 3.2lb/ft 2.1°C/W/3in

16 *Serrated fins*



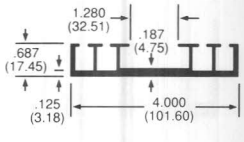
67940* 32.8 in²/in 1.9lb/ft 2.1°C/W/3in

17



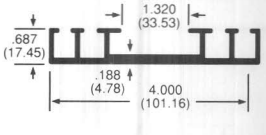
60285* 19.5 in²/in 1.3lb/ft 3.6°C/W/3in

18



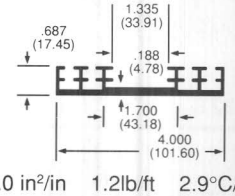
66700* 10.1 in²/in 1.1lb/ft 6.9°C/W/3in

19



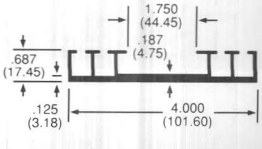
61445 17.0 in²/in 1.1lb/ft 4.1°C/W/3in

20



60665 24.0 in²/in 1.2lb/ft 2.9°C/W/3in

21



64220* 17.5 in²/in 1.0lb/ft 4.0°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

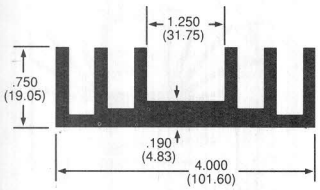
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in²/in	2.54	cm²/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

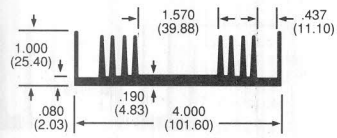
Note: The profiles are not to scale in relation to each other.

1



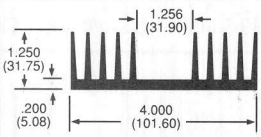
62990* 15.8 in²/in 1.2lb/ft 4.4°C/W/3in

2



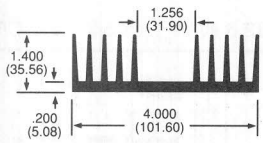
61030 23.9 in²/in 1.3lb/ft 2.9°C/W/3in

3



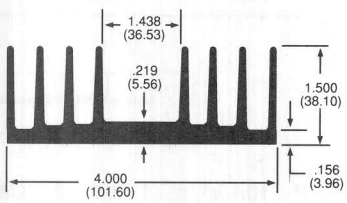
62475 28.8 in²/in 2.1lb/ft 2.4°C/W/3in

4



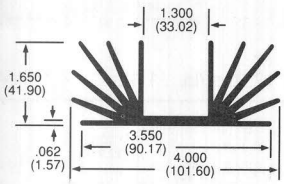
60905 32.4 in²/in 2.2lb/ft 2.1°C/W/3in

5



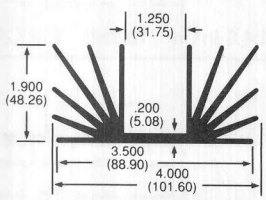
64900* 28.9 in²/in 2.1lb/ft 2.4°C/W/3in

6 †



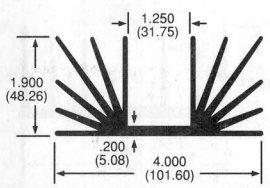
65450 32.8 in²/in 2.0lb/ft 2.1°C/W/3in

7



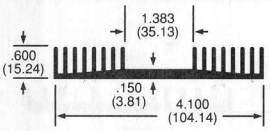
63795 36.5 in²/in 2.1lb/ft 1.9°C/W/3in

8 †



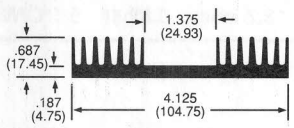
62720 36.5 in²/in 2.2lb/ft 1.9°C/W/3in

9 *Serrated fins*



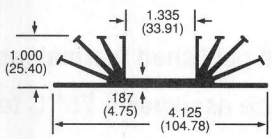
62640* 23.6 in²/in 1.1lb/ft 3.0°C/W/3in

10



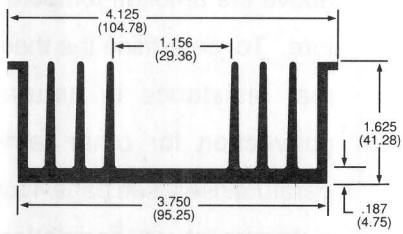
62135* 21.3 in²/in 1.6lb/ft 3.3°C/W/3in

11



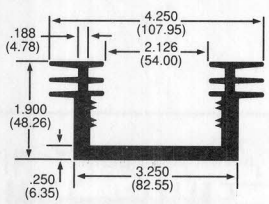
60080 23.6 in²/in 1.2lb/ft 2.9°C/W/3in

12



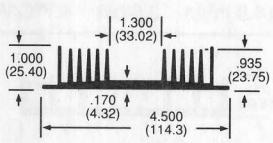
62430* 30.6 in²/in 2.0lb/ft 2.3°C/W/3in

13



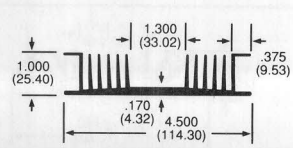
63090* 24.0 in²/in 2.5lb/ft 2.9°C/W/3in

14



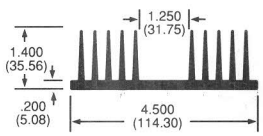
60805 24.5 in²/in 1.7lb/ft 2.9°C/W/3in

15



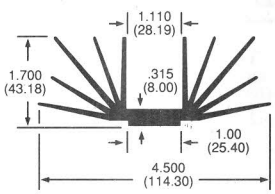
61025* 31.8 in²/in 1.6lb/ft 2.2°C/W/3in

16



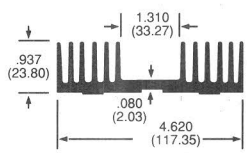
60350 35.0 in²/in 2.4lb/ft 2.0°C/W/3in

17



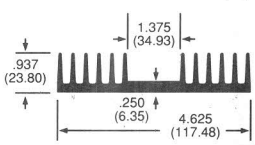
60480 33.0 in²/in 1.8lb/ft 2.1°C/W/3in

18 *Serrated fins*



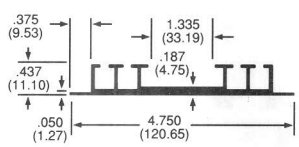
64725* 27.0 in²/in 1.9lb/ft 2.6°C/W/3in

19 *Serrated fins*



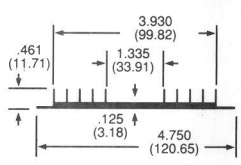
60860* 31.6 in²/in 2.0lb/ft 2.2°C/W/3in

20



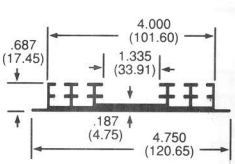
65040* 15.1 in²/in 1.0lb/ft 4.6°C/W/3in

21



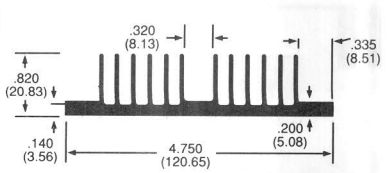
60075 16.0 in²/in 0.9lb/ft 4.4°C/W/3in

22



60590 25.5 in²/in 1.3lb/ft 2.8°C/W/3in

23



67610* 30.9 in²/in 1.6lb/ft 2.3°C/W/3in

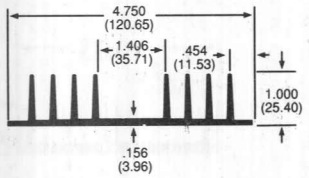
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

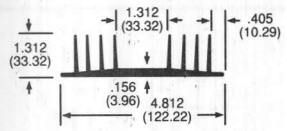
Key:
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



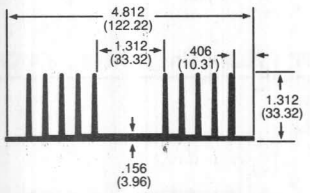
60735 23.0 in²/in 1.6lb/ft 3.1°C/W/3in

2



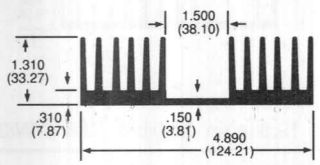
66635* 28.1 in²/in 1.6lb/ft 2.5°C/W/3in

3



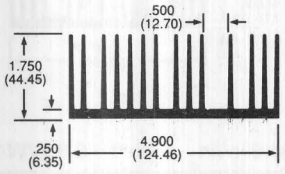
60840 36.0 in²/in 1.9lb/ft 2.0°C/W/3in

4



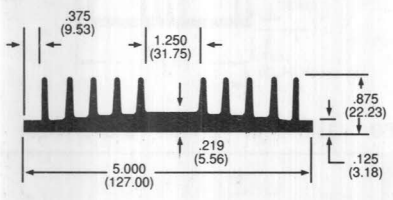
67210* 34.7 in²/in 2.7lb/ft 2.0°C/W/3in

5



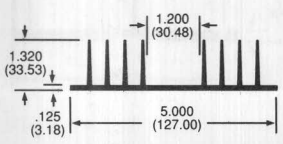
63615* 50.5 in²/in 4.3lb/ft 1.4°C/W/3in

6 *Serrated fins*



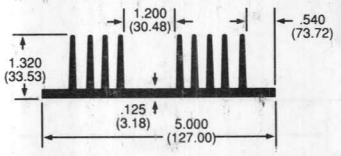
64905* 19.3 in²/in 1.9lb/ft 3.6°C/W/3in

7



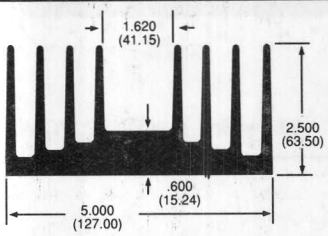
64140* 31.8 in²/in 1.2lb/ft 2.2°C/W/3in

8



65610* 27.6 in²/in 1.9lb/ft 2.5°C/W/3in

9

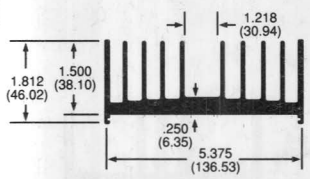


64955* 45.8 in²/in 5.4lb/ft 1.5°C/W/3in

Optimization

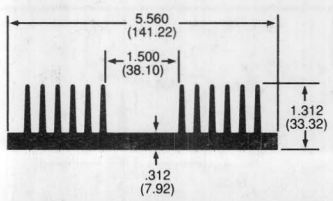
Optimization in either forced or natural convection can result in cost and size reduction of the heat sink. In forced convection, optimization can reduce the size of the fan or blower. See page 4 for more information concerning optimization.

10



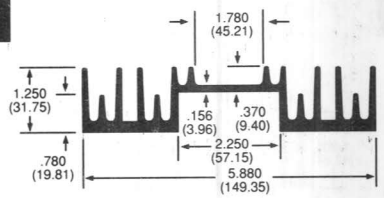
60405* 37.8 in²/in 2.8lb/ft 1.9°C/W/3in

11



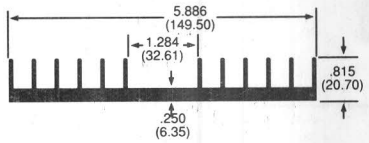
62170* 34.8 in²/in 3.1lb/ft 2.0°C/W/3in

12



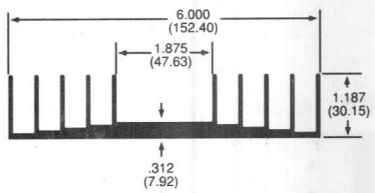
63145* 34.6 in²/in 2.5lb/ft 2.0°C/W/3in

13



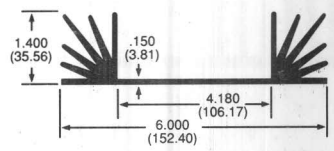
60970 27.0 in²/in 2.4lb/ft 2.6°C/W/3in

14



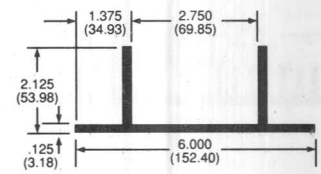
60440 33.6 in²/in 2.3lb/ft 2.1°C/W/3in

15



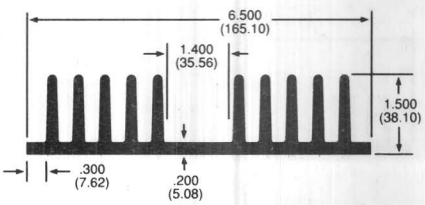
63025* 29.8 in²/in 2.4lb/ft 2.3°C/W/3in

16



66075* 20.3 in²/in 2.1lb/ft 3.4°C/W/3in

17



61465* 40.5 in²/in 4.1lb/ft 1.7°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

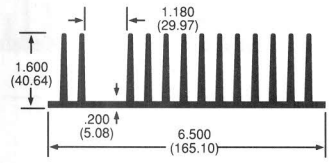
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in²/in	2.54	cm²/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

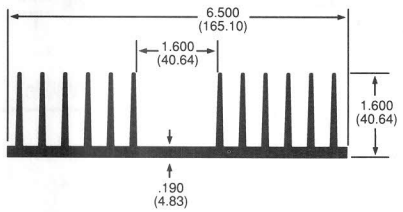
Note: The profiles are not to scale in relation to each other.

1



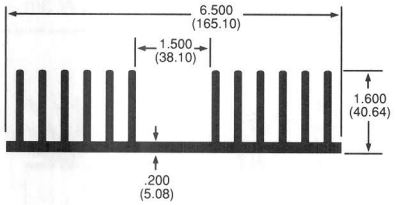
64155 49.8 in²/in 3.3lb/ft 1.4°C/W/3in

2 †



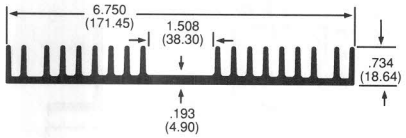
61475 49.3 in²/in 2.8lb/ft 1.4°C/W/3in

3



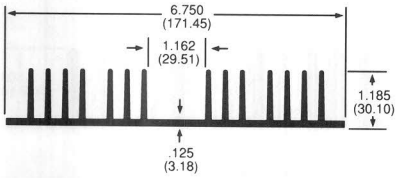
60900 47.0 in²/in 4.0lb/ft 1.5°C/W/3in

4



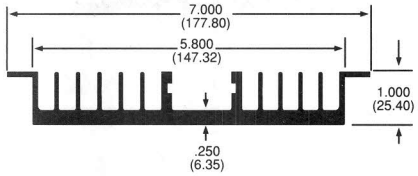
61230 35.5 in²/in 2.0lb/ft 2.1°C/W/3in

5



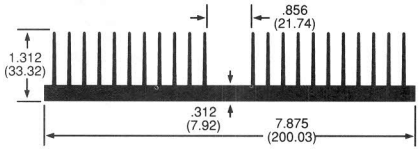
62490* 40.3 in²/in 2.3lb/ft 1.7°C/W/3in

6



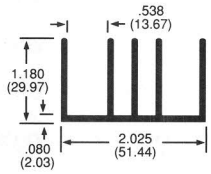
61845* 33.8 in²/in 2.9lb/ft 2.1°C/W/3in

7



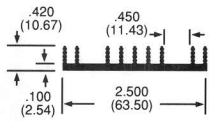
67215* 58.3 in²/in 4.8lb/ft 1.2°C/W/3in

8



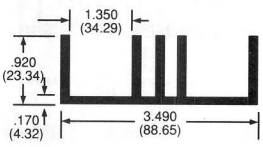
65645 14.9 in²/in 0.6lb/ft 4.7°C/W/3in

9 *Serrated fins*



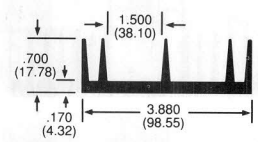
63810* 11.1 in²/in 0.4lb/ft 6.3°C/W/3in

10



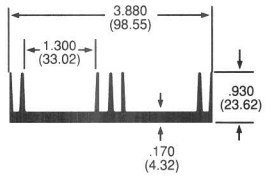
65935 14.8 in²/in 1.1lb/ft 4.7°C/W/3in

11



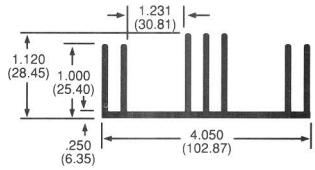
63725 13.4 in²/in 1.0lb/ft 5.2°C/W/3in

12



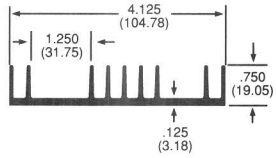
61100 18.8 in²/in 1.2lb/ft 3.7°C/W/3in

13



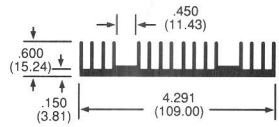
64705* 20.5 in²/in 1.7lb/ft 3.4°C/W/3in

14



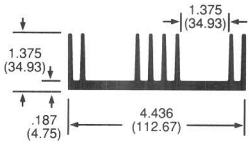
61275* 19.8 in²/in 1.0lb/ft 3.5°C/W/3in

15 *Serrated fins*



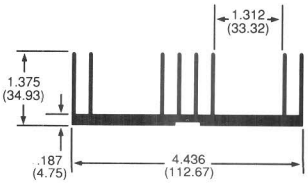
65085* 24.6 in²/in 1.0lb/ft 2.8°C/W/3in

16



63060 28.3 in²/in 2.1lb/ft 2.5°C/W/3in

17



60120 27.0 in²/in 1.8lb/ft 2.6°C/W/3in

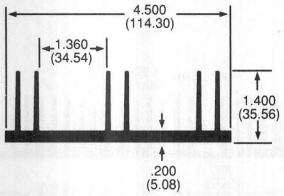
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

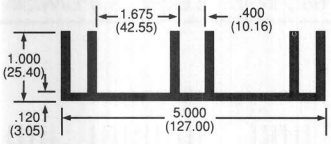
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



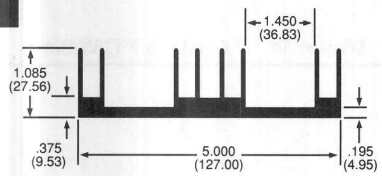
62150 23.8 in²/in 1.7lb/ft 2.9°C/W/3in

2



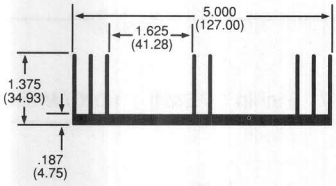
60775* 20.8 in²/in 1.5lb/ft 3.4°C/W/3in

3



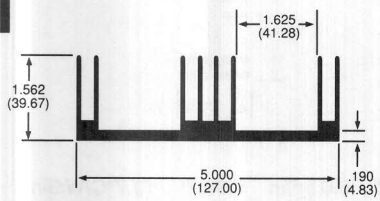
68150* 22.4 in²/in 2.0lb/ft 3.1°C/W/3in

4



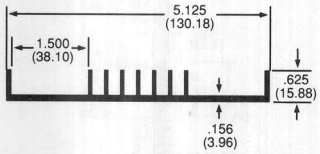
60715* 29.4 in²/in 1.9lb/ft 2.4°C/W/3in

5



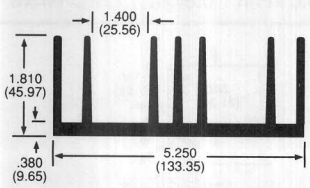
61525 30.5 in²/in 2.3lb/ft 2.3°C/W/3in

6



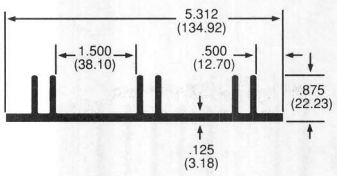
60470* 19.0 in²/in 1.4lb/ft 3.7°C/W/3in

7



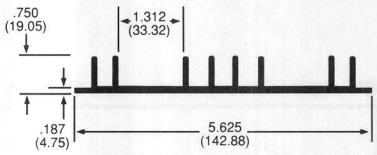
61645* 31.3 in²/in 4.3lb/ft 2.2°C/W/3in

8



60845* 21.0 in²/in 1.2lb/ft 3.3°C/W/3in

9

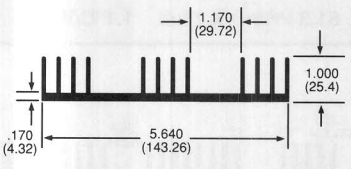


61545* 20.7 in²/in 1.8lb/ft 3.4°C/W/3in

Technical Capabilities

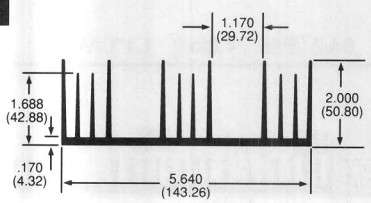
Aavid Engineering's application engineering department has the capability to perform a full thermal analysis, including optimization, in order to find the right Aavid heat sink for your application. Please refer to the Request for Information sheets on pages 64 and 65.

10



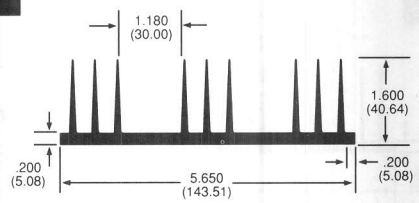
62460 31.6 in²/in 2.1lb/ft 2.2°C/W/3in

11



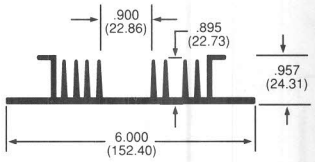
62410* 51.8 in²/in 2.7lb/ft 1.5°C/W/3in

12



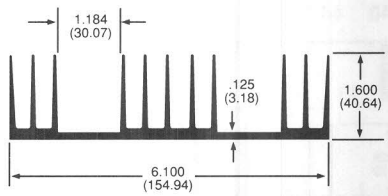
61910 36.9 in²/in 2.5lb/ft 1.9°C/W/3in

13



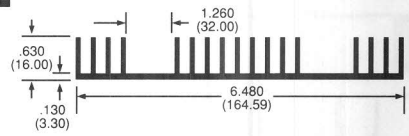
62790 29.8 in²/in 2.0lb/ft 2.2°C/W/3in

14



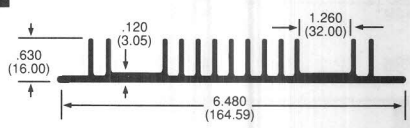
61690 43.7 in²/in 2.6lb/ft 1.6°C/W/3in

15



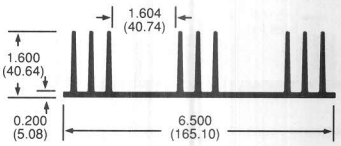
65505* 30.2 in²/in 1.6lb/ft 2.3°C/W/3in

16



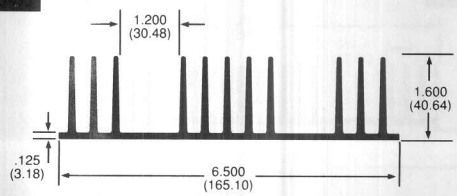
61695* 26.5 in²/in 1.6lb/ft 2.6°C/W/3in

17



65545 37.9 in²/in 2.8lb/ft 1.8°C/W/3in

18



61200* 45.7 in²/in 2.4lb/ft 1.6°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

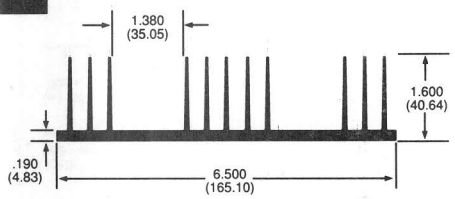
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

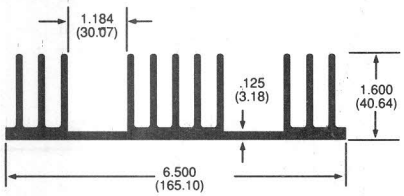
Note: The profiles are not to scale in relation to each other.

1



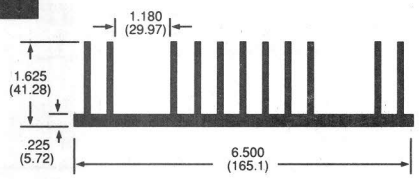
61715 44.4 in^2/in 2.9lb/ft 1.5°C/W/3in

2



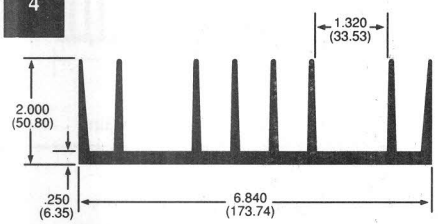
61440 44.3 in^2/in 2.8lb/ft 1.5°C/W/3in

3



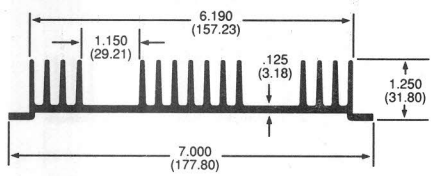
64985 44.2 in^2/in 1.7lb/ft 1.6°C/W/3in

4



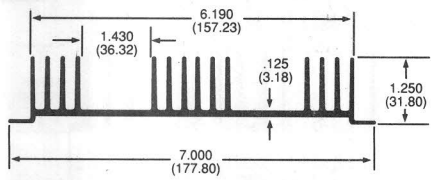
60795 42.2 in^2/in 4.2lb/ft 1.7°C/W/3in

5



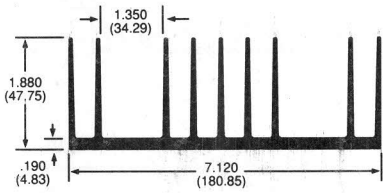
61340* 44.5 in^2/in 2.4lb/ft 1.6°C/W/3in

6



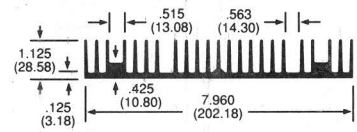
61265 42.8 in^2/in 2.3lb/ft 1.6°C/W/3in

7



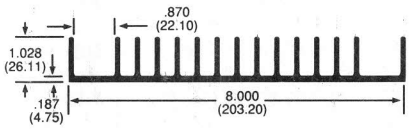
63260* 43.8 in^2/in 3.2lb/ft 1.6°C/W/3in

8



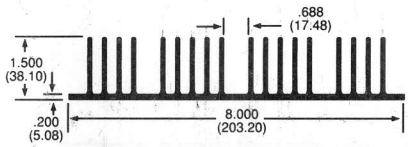
62435* 61.0 in^2/in 3.0lb/ft 1.2°C/W/3in

9



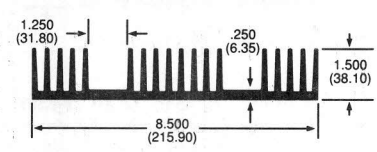
64010* 40.5 in^2/in 3.4lb/ft 1.7°C/W/3in

10



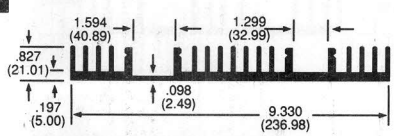
63625 61.3 in^2/in 4.1lb/ft 1.1°C/W/3in

11



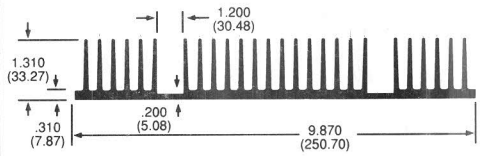
62495 64.2 in^2/in 4.6lb/ft 1.1°C/W/3in

12



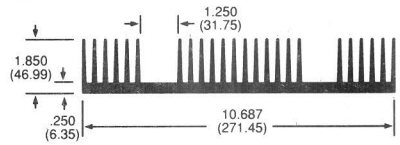
64005* 43.0 in^2/in 3.7lb/ft 1.6°C/W/3in

13



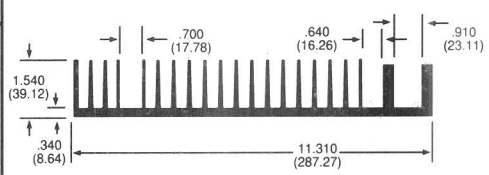
62030 66.9 in^2/in 5.6lb/ft 1.0°C/W/3in

14



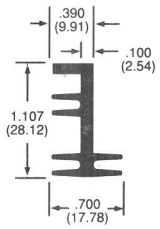
63910 95.5 in^2/in 7.5lb/ft 0.7°C/W/3in

15



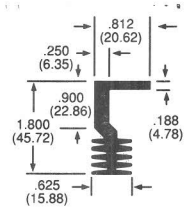
66225 71.2 in^2/in 7.8lb/ft 1.0°C/W/3in

16



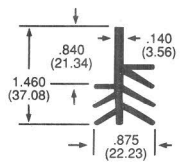
62585* 6.6 in^2/in 0.3lb/ft 10.7°C/W/3in

17



66670* 9.0 in^2/in 0.8lb/ft 7.8°C/W/3in

18



66590* 9.0 in^2/in 0.4lb/ft 7.8°C/W/3in

AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
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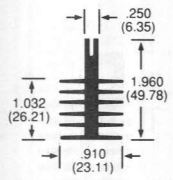
Note: The profiles are not to scale in relation to each other.

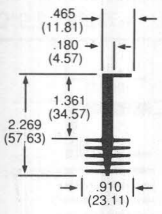
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



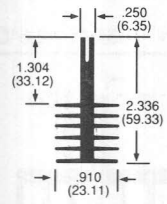
63990 12.6 in²/in 0.8lb/ft 5.6°C/W/3in

2



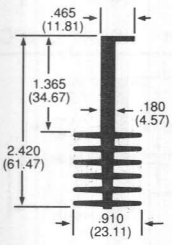
63085* 13.5 in²/in 0.7lb/ft 5.2°C/W/3in

3



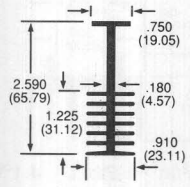
63995* 13.3 in²/in 0.9lb/ft 5.3°C/W/3in

4



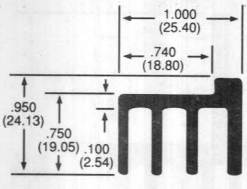
63220 15.1 in²/in 0.8lb/ft 4.6°C/W/3in

5



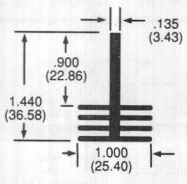
60380* 20.0 in²/in 0.9lb/ft 3.6°C/W/3in

6



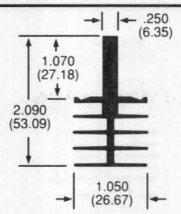
64560 7.8 in²/in 0.5lb/ft 9.0°C/W/3in

7



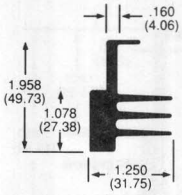
68255* 9.8 in²/in 0.5lb/ft 7.1°C/W/3in

8



67625* 13.2 in²/in 0.9lb/ft 5.3°C/W/3in

9

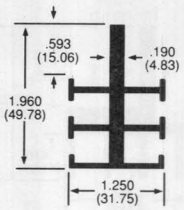


62320* 10.5 in²/in 1.0lb/ft 6.7°C/W/3in

Fabrication Capabilities

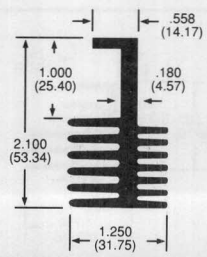
Aavid has extensive manufacturing capabilities for the complete fabrication of heat sinks from extrusions. The Aavid plant is equipped with high speed saws, a battery of CNC machining centers, and an automated anodizing line - incorporating the latest technology available in the world.

10



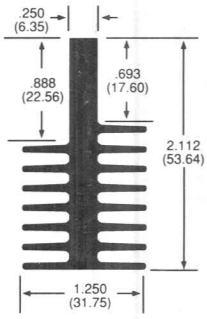
61560* 16.0 in²/in 0.7lb/ft 4.4°C/W/3in

11



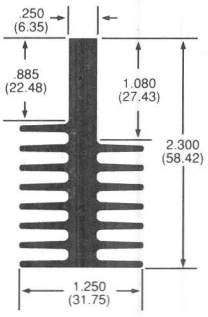
63005 18.9 in²/in 1.1lb/ft 3.7°C/W/3in

12



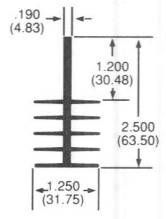
66870* 18.2 in²/in 1.1lb/ft 3.8°C/W/3in

13



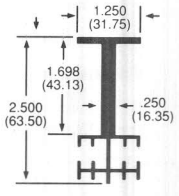
63010 20.1 in²/in 1.2lb/ft 3.6°C/W/3in

14



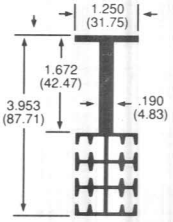
61150 18.0 in²/in 0.9lb/ft 3.9°C/W/3in

15



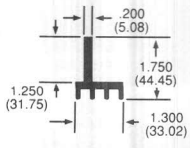
62715* 15.0 in²/in 1.0lb/ft 4.7°C/W/3in

16



60685* 23.3 in²/in 1.4lb/ft 3.0°C/W/3in

17



62760* 5.1 in²/in 0.7lb/ft 13.8°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

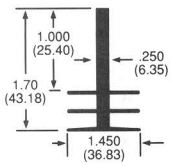
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

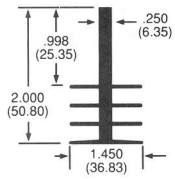
Note: The profiles are not to scale in relation to each other.

1 *Serrated fins*



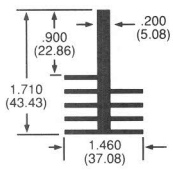
62970* 7.4 in^2/in 0.8lb/ft 9.5°C/W/3in

2



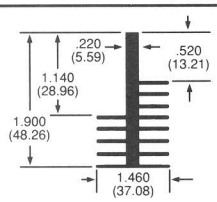
63265* 14.8 in^2/in 1.0lb/ft 4.7°C/W/3in

3



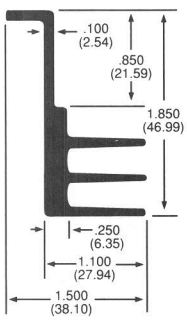
65155 15.2 in^2/in 0.8lb/ft 4.6°C/W/3in

4



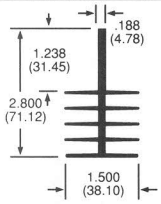
65460* 16.6 in^2/in 0.9lb/ft 4.2°C/W/3in

5



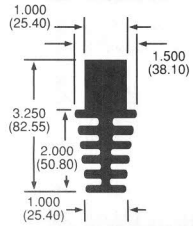
63185* 10.1 in^2/in 0.7lb/ft 6.9°C/W/3in

6



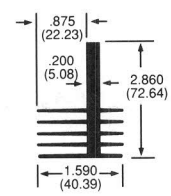
65420 18.7 in^2/in 1.3lb/ft 3.7°C/W/3in

7



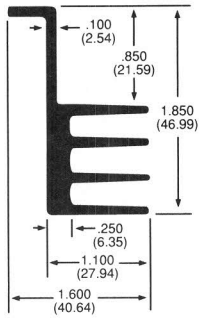
61295 20.0 in^2/in 3.4lb/ft 3.5°C/W/3in

8



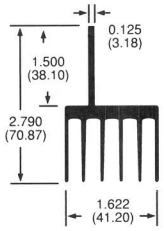
65160* 14.3 in^2/in 1.4lb/ft 4.9°C/W/3in

9



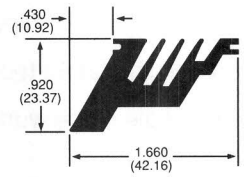
63100* 11.6 in^2/in 0.8lb/ft 6.0°C/W/3in

10



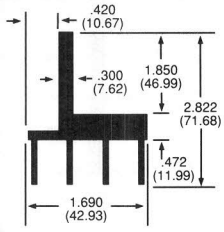
64710* 18.8 in^2/in 1.2lb/ft 3.7°C/W/3in

11 †



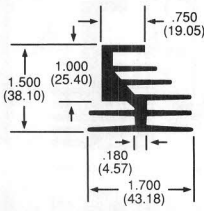
62985 8.9 in^2/in 0.7lb/ft 7.9°C/W/3in

12



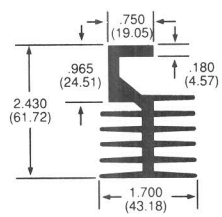
64845* 12.0 in^2/in 1.7lb/ft 5.8°C/W/3in

13



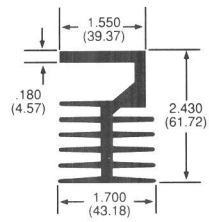
67565* 15.8 in^2/in 1.0lb/ft 4.4°C/W/3in

14



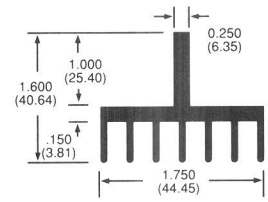
66470* 24.3 in^2/in 1.7lb/ft 2.9°C/W/3in

15



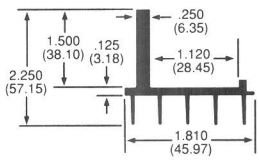
62050 26.1 in^2/in 1.6lb/ft 2.6°C/W/3in

16 *Serrated fins*



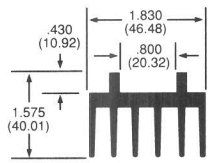
64285 12.1 in^2/in 0.9lb/ft 5.8°C/W/3in

17



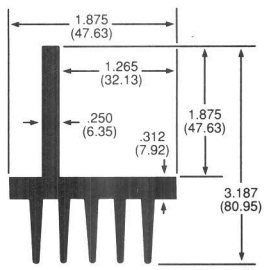
62850* 15.0 in^2/in 1.0lb/ft 4.7°C/W/3in

18



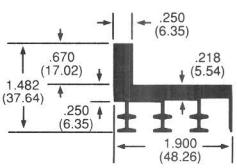
62610* 17.0 in^2/in 1.2lb/ft 4.1°C/W/3in

19



63050* 18.1 in^2/in 1.7lb/ft 3.9°C/W/3in

20



66490* 12.2 in^2/in 1.0lb/ft 5.7°C/W/3in

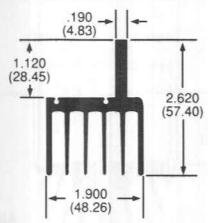
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

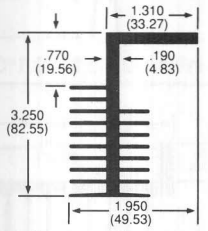
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



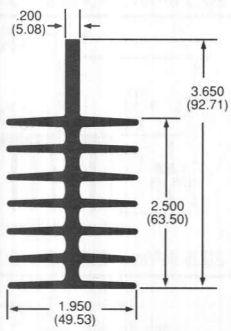
61905* 22.0 in²/in 1.5lb/ft 3.2°C/W/3in

2



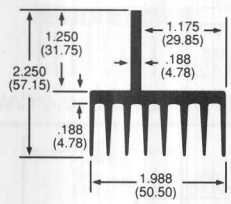
63770* 30.5 in²/in 1.8lb/ft 2.3°C/W/3in

3



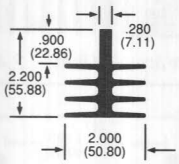
62390 28.0 in²/in 2.2lb/ft 2.5°C/W/3in

4



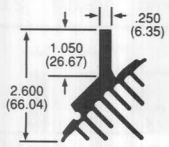
64295* 19.8 in²/in 1.1lb/ft 3.5°C/W/3in

5



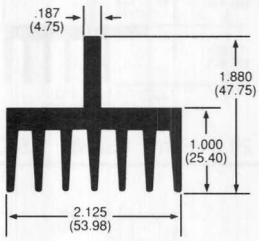
63095 18.2 in²/in 1.5lb/ft 3.8°C/W/3in

6



67200* 18.8 in²/in 1.8lb/ft 3.7°C/W/3in

7

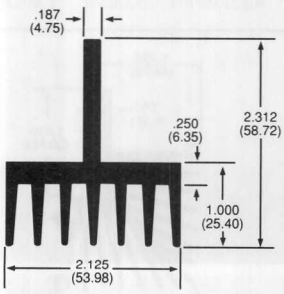


62315 16.0 in²/in 1.4lb/ft 4.4°C/W/3in

Performance vs. Length

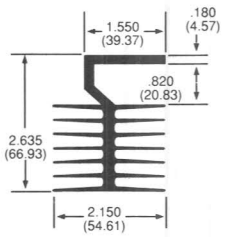
The thermal resistance of a heat sink changes significantly with length. To convert the published natural convection thermal resistance at a 3 inch length to a desired length, see page 5 for a length correction table.

8



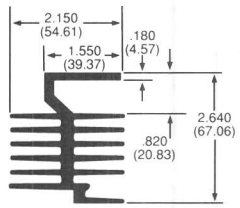
60740 18.0 in²/in 1.7lb/ft 3.9°C/W/3in

9



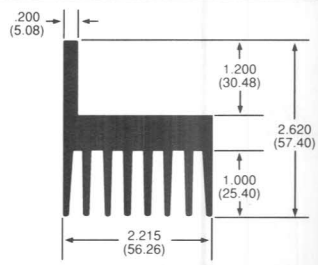
61775 36.7 in²/in 1.9lb/ft 1.9°C/W/3in

10



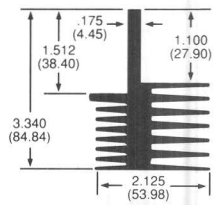
62575* 31.7 in²/in 1.8lb/ft 2.2°C/W/3in

11



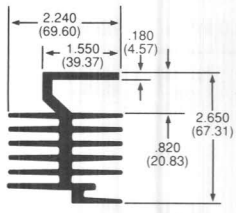
62480 22.8 in²/in 2.4lb/ft 3.1°C/W/3in

12



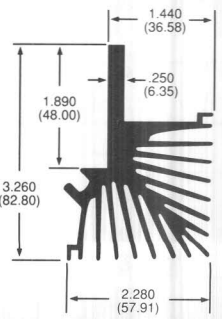
60575* 32.2 in²/in 3.8lb/ft 2.2°C/W/3in

13



61955* 32.3 in²/in 1.9lb/ft 2.2°C/W/3in

14



61820 36.1 in²/in 2.6lb/ft 1.9°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

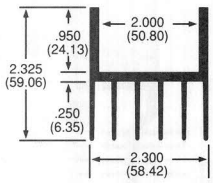
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in²/in	2.54	cm²/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

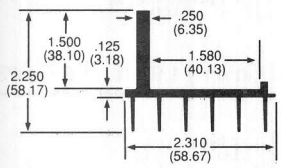
Note: The profiles are not to scale in relation to each other.

1



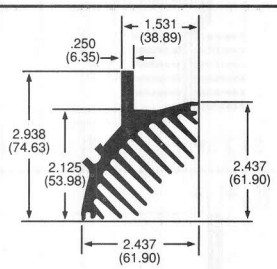
65235* 22.0 in²/in 1.7lb/ft 3.2°C/W/3in

2



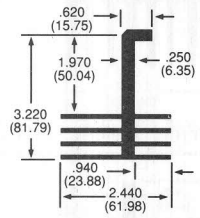
62855* 17.4 in²/in 1.1lb/ft 4.0°C/W/3in

3



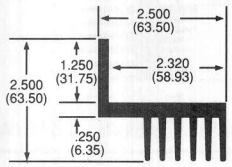
61800 27.8 in²/in 2.1lb/ft 2.5°C/W/3in

4



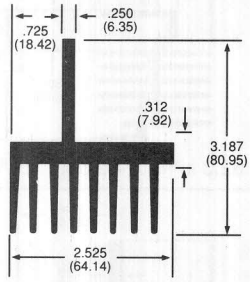
63420* 25.2 in²/in 2.1lb/ft 2.8°C/W/3in

5



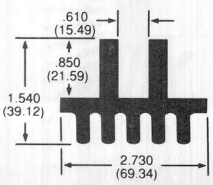
61185 18.0 in²/in 1.9lb/ft 3.9°C/W/3in

6



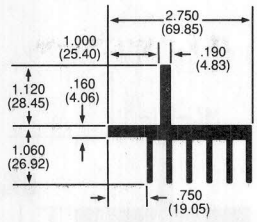
64240* 25.4 in²/in 2.3lb/ft 2.8°C/W/3in

7



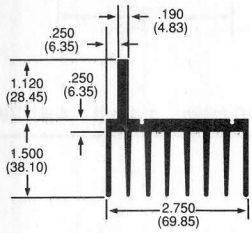
65425 10.2 in²/in 1.7lb/ft 6.9°C/W/3in

8



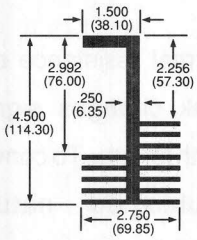
61345* 20.0 in²/in 1.5lb/ft 3.5°C/W/3in

9



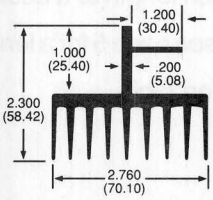
60600 28.5 in²/in 2.1lb/ft 2.4°C/W/3in

10



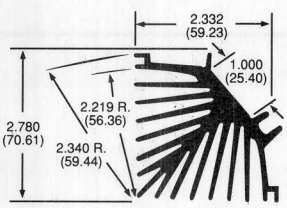
65690 43.6 in²/in 2.9lb/ft 1.6°C/W/3in

11



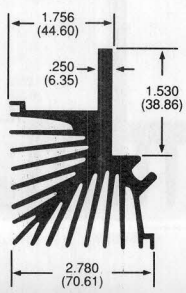
64435 12.4 in²/in 1.8lb/ft 5.6°C/W/3in

12



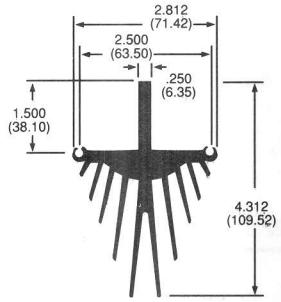
63440* 42.5 in²/in 3.0lb/ft 1.6°C/W/3in

13



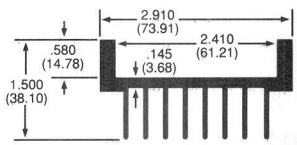
63110* 43.7 in²/in 3.4lb/ft 1.6°C/W/3in

14



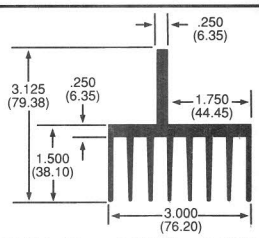
64255* 33.0 in²/in 2.6lb/ft 2.1°C/W/3in

15



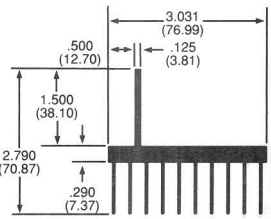
65495* 20.5 in²/in 1.4lb/ft 3.4°C/W/3in

16



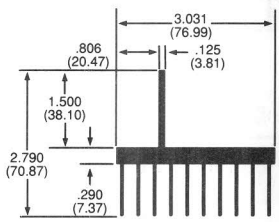
64805* 29.8 in²/in 2.3lb/ft 2.3°C/W/3in

17



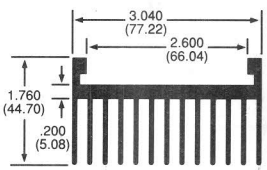
61625 29.6 in²/in 2.1lb/ft 2.4°C/W/3in

18



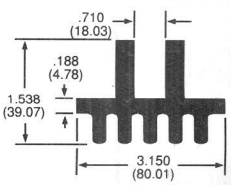
61750* 29.6 in²/in 2.1lb/ft 2.4°C/W/3in

19



67315* 34.4 in²/in 1.9lb/ft 2.0°C/W/3in

20



65220 14.3 in²/in 2.1lb/ft 4.9°C/W/3in

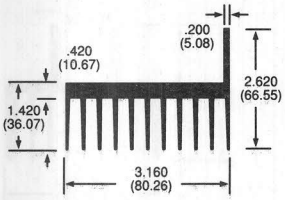
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

Note: The profiles are not to scale in relation to each other.

Key:

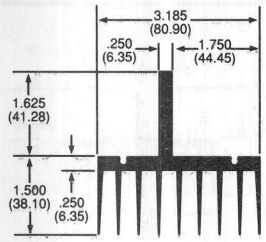
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



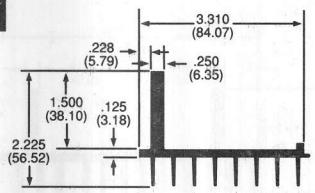
63715 7.0 in²/in 0.3lb/ft 9.7°C/W/3in

2



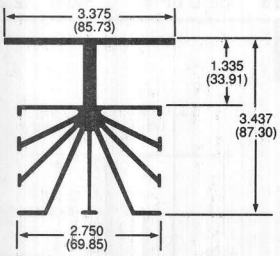
60400 32.5 in²/in 2.5lb/ft 2.2°C/W/3in

3



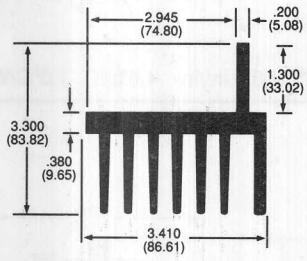
61500* 19.8 in²/in 1.4lb/ft 3.6°C/W/3in

4



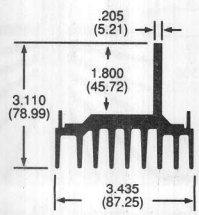
60000 44.5 in²/in 2.3lb/ft 1.6°C/W/3in

5



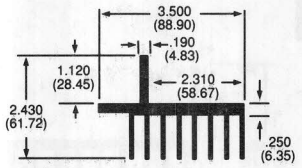
62770* 32.9 in²/in 3.8lb/ft 2.1°C/W/3in

6



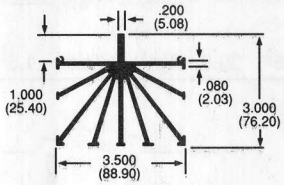
63330* 29.8 in²/in 2.7lb/ft 2.4°C/W/3in

7



61160* 27.0 in²/in 2.2lb/ft 2.6°C/W/3i2

8

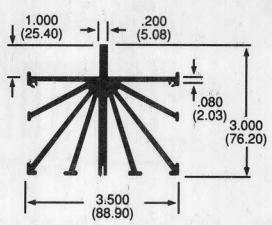


61130* 40.5 in²/in 2.6lb/ft 1.7°C/W/3in

Temperature Rise Factor

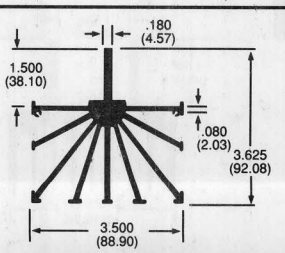
The published thermal resistance assumes a 75° C temperature rise of the heat sink above the ambient temperature. To determine the thermal resistance in natural convection for other temperature rises, see page 4 for a temperature correction table.

9



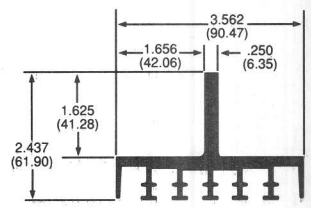
63610* 39.0 in²/in 2.9lb/ft 1.8°C/W/3in

10



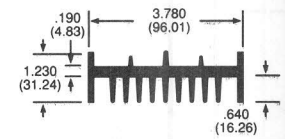
61470* 38.0 in²/in 2.7lb/ft 1.8°C/W/3in

11



60375 22.5 in²/in 2.0lb/ft 3.1°C/W/3in

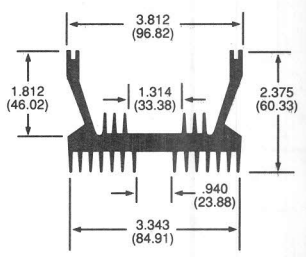
12



62565 24.8 in²/in 1.6lb/ft 2.8°C/W/3in

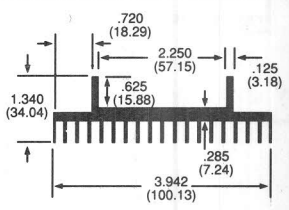
13

Serrated fins



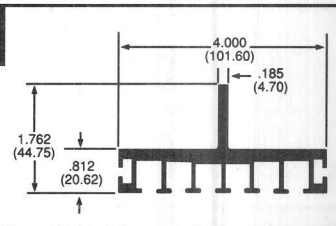
60420* 26.6 in²/in 2.0lb/ft 2.6°C/W/3in

14



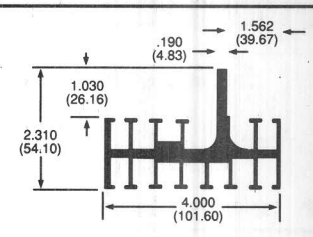
65405* 26.9 in²/in 2.0lb/ft 2.6°C/W/3in

15



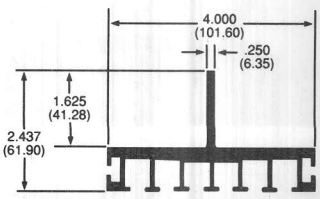
60475* 25.6 in²/in 1.9lb/ft 2.7°C/W/3in

16



61495* 30.2 in²/in 2.2lb/ft 2.3°C/W/3in

17



60550 25.0 in²/in 2.1lb/ft 2.8°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

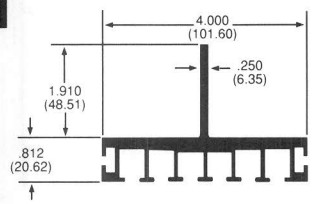
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
C/W/3"	1.02	C/W/75mm

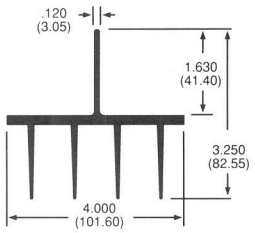
Note: The profiles are not to scale in relation to each other.

1



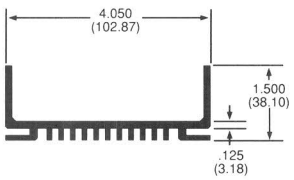
62295* 25.3 in^2/in 2.2lb/ft 2.8°C/W/3in

2



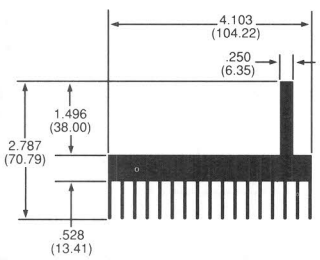
60325* 23.5 in^2/in 1.6lb/ft 3.0°C/W/3in

3



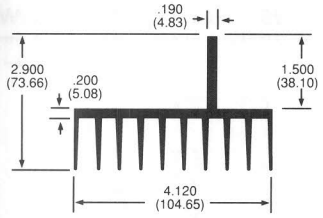
63035* 21.4 in^2/in 1.5lb/ft 3.3°C/W/3in

4



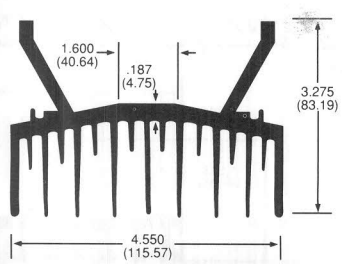
62635* 38.2 in^2/in 3.9lb/ft 1.8°C/W/3in

5



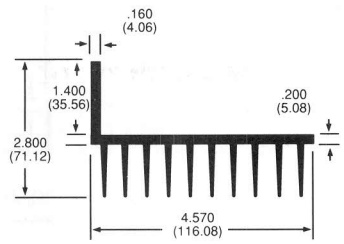
63250* 32.4 in^2/in 2.8lb/ft 2.2°C/W/3in

6



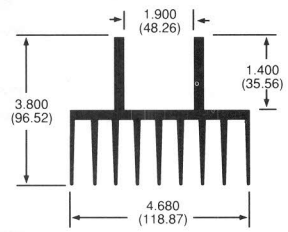
64865* 58.1 in^2/in 4.8lb/ft 1.2°C/W/3in

7



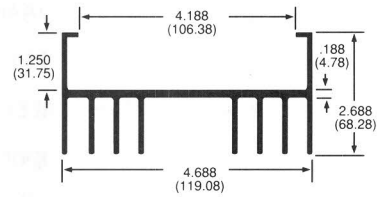
63735* 39.9 in^2/in 2.7lb/ft 1.8°C/W/3in

8



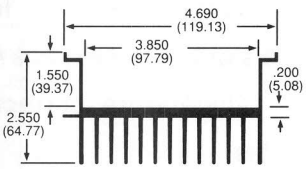
64275* 51.8 in^2/in 6.6lb/ft 1.4°C/W/3in

9



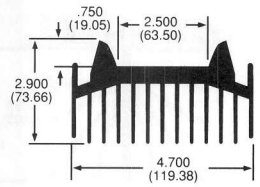
60960* 37.5 in^2/in 2.3lb/ft 1.9°C/W/3in

10



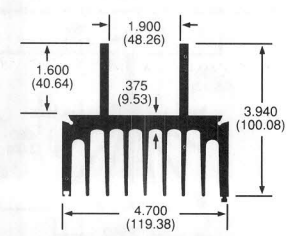
62910* 34.3 in^2/in 2.3lb/ft 2.0°C/W/3in

11



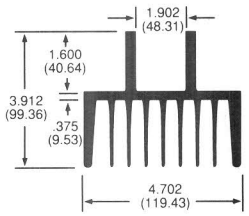
67635 58.1 in^2/in 4.9lb/ft 1.2°C/W/3in

12



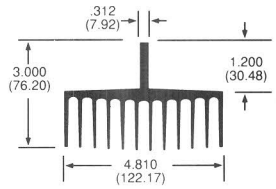
67195* 49.8 in^2/in 6.2lb/ft 1.4°C/W/3in

13 †



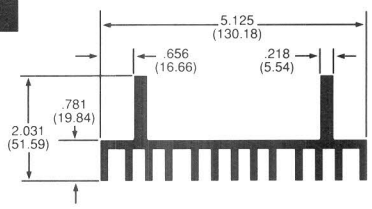
64810 51.4 in^2/in 6.0lb/ft 1.4°C/W/3in

14 *Serrated fins*



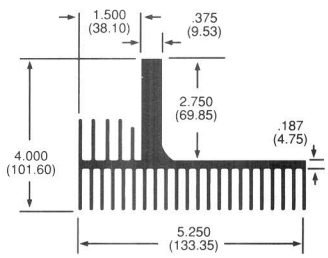
64610 57.0 in^2/in 3.7lb/ft 1.2°C/W/3in

15



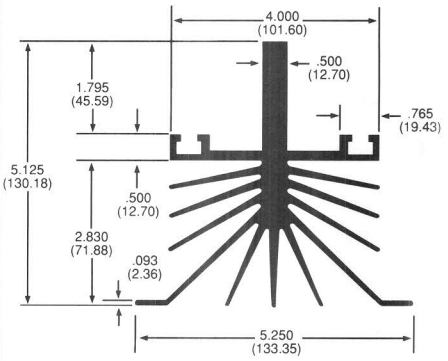
60465 32.0 in^2/in 2.9lb/ft 2.2°C/W/3in

16



67570* 68.4 in^2/in 4.6lb/ft 1.0°C/W/3in

17



60965 62.3 in^2/in 5.9lb/ft 1.2°C/W/3in

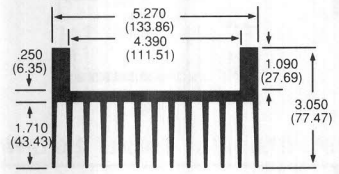
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

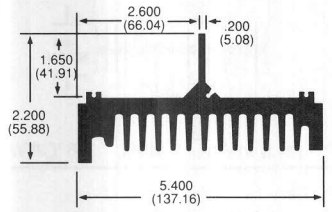
Key:
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



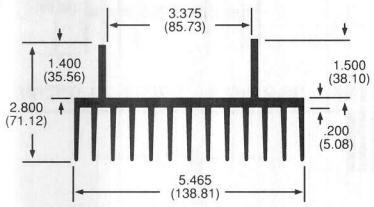
62110 60.0 in²/in 5.1lb/ft 1.2°C/W/3in

2



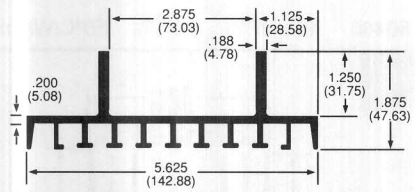
64030* 37.0 in²/in 4.7lb/ft 1.9°C/W/3in

3



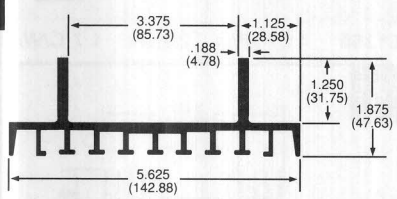
65100* 45.3 in²/in 3.7lb/ft 1.5°C/W/3in

4



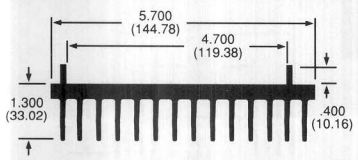
62960* 29.6 in²/in 2.4lb/ft 2.4°C/W/3in

5



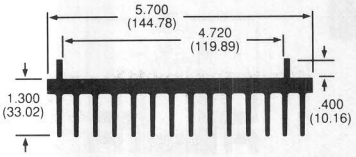
60925* 32.0 in²/in 2.2lb/ft 2.2°C/W/3in

6



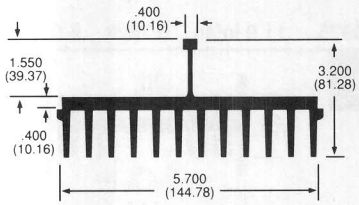
61840* 43.0 in²/in 4.0lb/ft 1.6°C/W/3in

7



67665* 39.7 in²/in 4.1lb/ft 1.8°C/W/3in

8

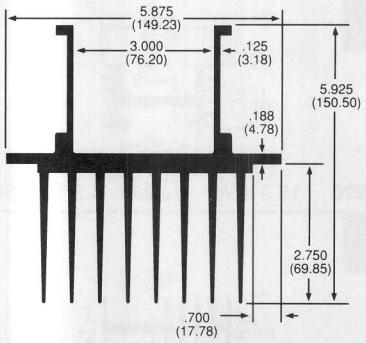


60425* 45.3 in²/in 5.8lb/ft 1.5°C/W/3in

Optimization

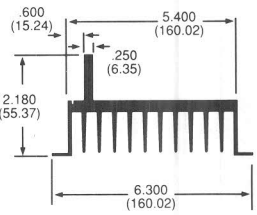
Optimization in either forced or natural convection can result in cost and size reduction of the heat sink. In forced convection, optimization can reduce the size of the fan or blower. See page 4 for more information concerning optimization.

9 †



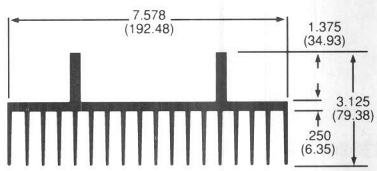
62270 68.1 in²/in 6.6lb/ft 1.1°C/W/3in

10



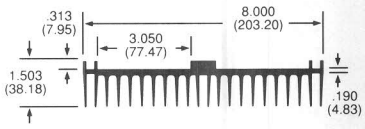
63690 50.9 in²/in 5.5lb/ft 1.4°C/W/3in

11 †



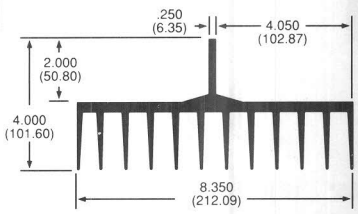
63155* 75.2 in²/in 5.7lb/ft 0.9°C/W/3in

12



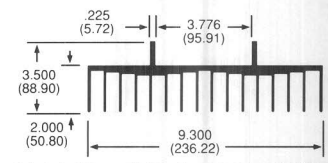
64670 63.0 in²/in 5.1lb/ft 1.1°C/W/3in

13



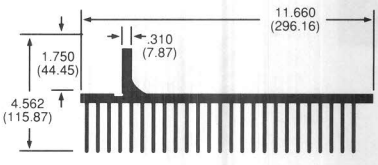
64395 63.2 in²/in 7.0lb/ft 1.1°C/W/3in

14 †



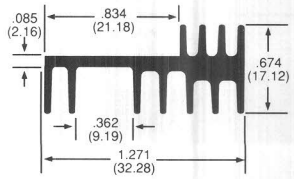
63595 81.1 in²/in 5.7lb/ft 0.9°C/W/3in

15



65820 149.6 in²/in 11.3lb/ft 0.5°C/W/3in

16



64765 8.8 in²/in 0.4lb/ft 8.0°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

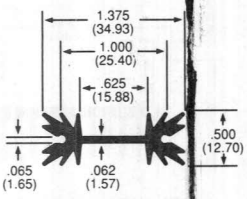
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in²/in	2.54	cm²/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

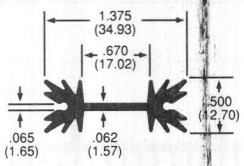
Note: The profiles are not to scale in relation to each other.

1 †



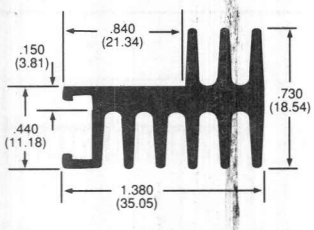
60130 7.6 in²/in 0.4lb/ft 9.2°C/W/3in

2



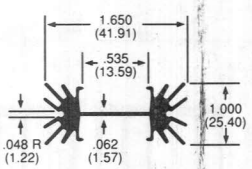
63620 7.6 in²/in 0.4lb/ft 9.2°C/W/3in

3



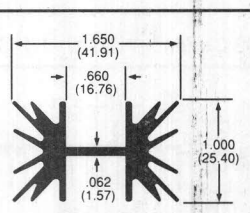
61330* 9.4 in²/in 0.5lb/ft 7.4°C/W/3in

4



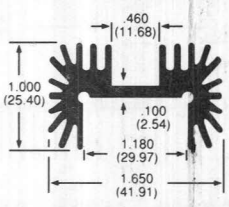
66785* 12.6 in²/in 0.6lb/ft 5.6°C/W/3in

5



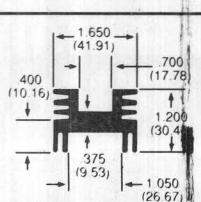
63130 13.4 in²/in 0.6lb/ft 5.2°C/W/3in

6



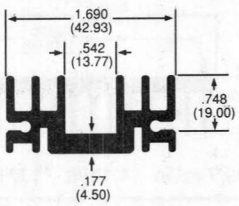
63485 15.4 in²/in 0.8lb/ft 4.5°C/W/3in

7



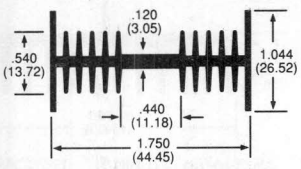
60525 12.5 in²/in 1.2lb/ft 5.6°C/W/3in

8



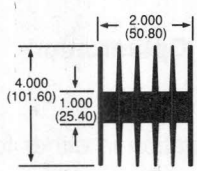
63075 11.9 in²/in 0.7lb/ft 5.9°C/W/3in

9



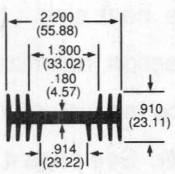
67105* 25.1 in²/in 0.6lb/ft 2.8°C/W/3in

10



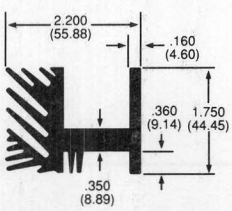
64850* 42.0 in²/in 4.3lb/ft 1.7°C/W/3in

11



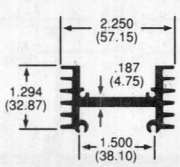
61120 15.0 in²/in 0.8lb/ft 4.7°C/W/3in

12



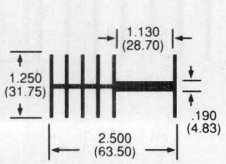
62165* 20.7 in²/in 1.9lb/ft 3.4°C/W/3in

13



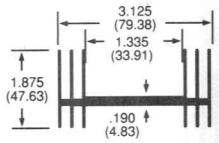
61220 16.5 in²/in 1.0lb/ft 4.3°C/W/3in

14



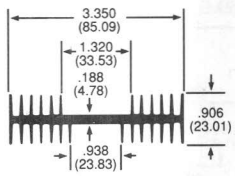
63290* 20.4 in²/in 0.9lb/ft 3.2°C/W/3in

15



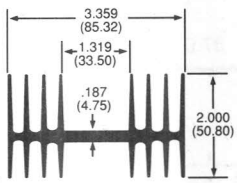
65015* 27.0 in²/in 1.4lb/ft 2.6°C/W/3in

16



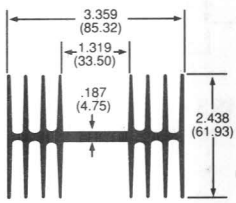
60450* 26.5 in²/in 1.5lb/ft 2.6°C/W/3in

17



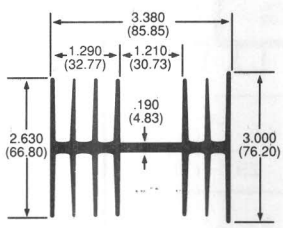
60455 36.2 in²/in 1.7lb/ft 1.9°C/W/3in

18



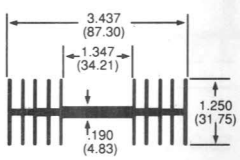
60460 43.2 in²/in 2.0lb/ft 1.6°C/W/3in

19



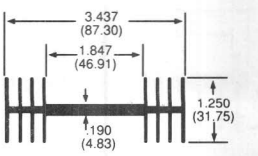
61360 41.7 in²/in 2.2lb/ft 1.7°C/W/3in

20



60210* 30.0 in²/in 1.2lb/ft 2.3°C/W/3in

21



60195 25.4 in²/in 1.1lb/ft 2.7°C/W/3in

AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
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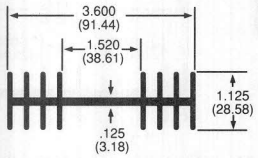
EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

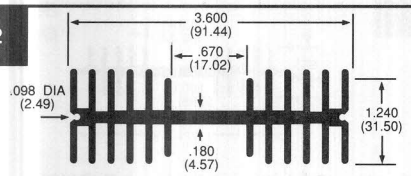
Key:
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



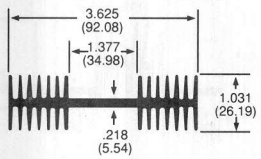
61140 29.4 in²/in 1.4lb/ft 2.4°C/W/3in

2



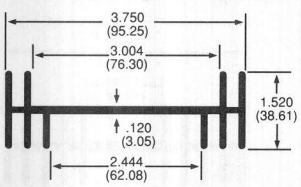
66980* 31.6 in²/in 1.6lb/ft 2.2°C/W/3in

3



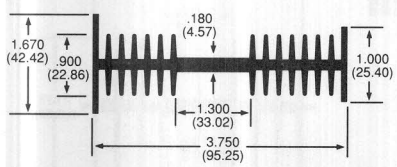
61490* 33.3 in²/in 1.6lb/ft 2.1°C/W/3in

4



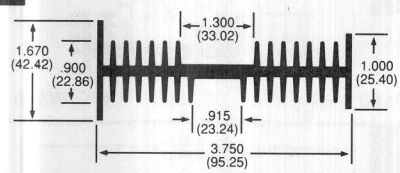
60370* 21.7 in²/in 1.2lb/ft 3.2°C/W/3in

5



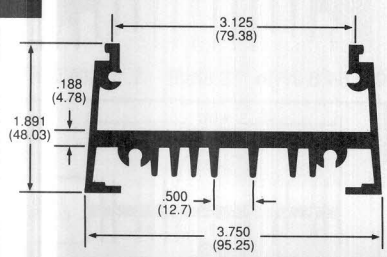
61110* 31.2 in²/in 1.4lb/ft 2.2°C/W/3in

6



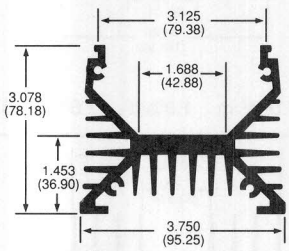
61115* 32.7 in²/in 1.4lb/ft 2.1°C/W/3in

7



62505 24.8 in²/in 1.7lb/ft 2.8°C/W/3in

8

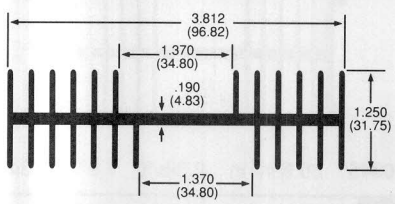


62345 41.7 in²/in 31.0lb/ft 1.6°C/W/3in

Technical Capabilities

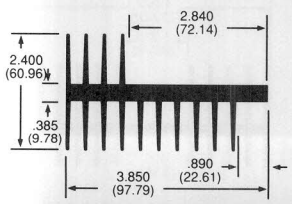
Aavid Engineering's application engineering department has the capability to perform a full thermal analysis, including optimization, in order to find the right Aavid heat sink for your application. Please refer to the Request for Information sheets on pages 64 and 65.

9



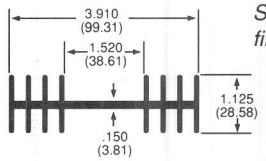
60610 34.2 in²/in 1.6lb/ft 2.0°C/W/3in

10



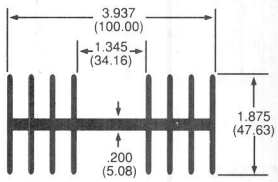
65225 37.5 in²/in 2.8lb/ft 1.9°C/W/3in

11 *Serrated fins*



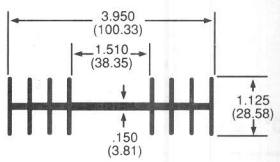
60880* 29.2 in²/in 1.4lb/ft 2.4°C/W/3in

12



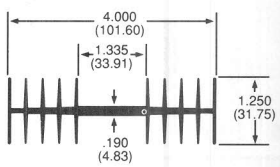
60500 33.7 in²/in 2.2lb/ft 2.0°C/W/3in

13



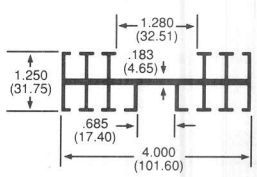
60615* 21.5 in²/in 1.4lb/ft 3.2°C/W/3in

14



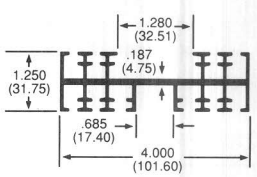
60175 29.0 in²/in 1.4lb/ft 2.4°C/W/3in

15



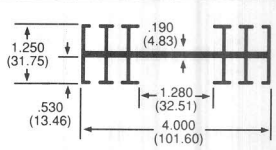
64480* 28.3 in²/in 1.5lb/ft 2.5°C/W/3in

16



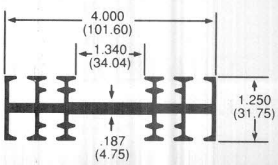
60190* 31.7 in²/in 1.9lb/ft 2.2°C/W/3in

17



64370 28.1 in²/in 1.4lb/ft 2.5°C/W/3in

18



60645 23.0 in²/in 1.6lb/ft 3.0°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

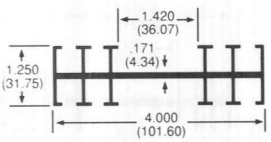
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in²/in	2.54	cm²/cm
lb/ft	1.5	gm/mm
C/W/3"	1.02	°C/W/75mm

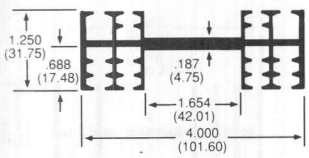
Note: The profiles are not to scale in relation to each other.

1



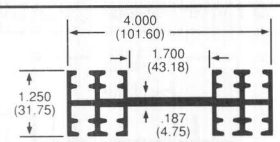
64960* 24.1 in²/in 1.3lb/ft 2.9°C/W/3in

2



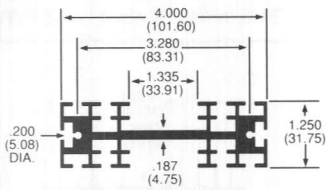
60700* 24.0 in²/in 1.6lb/ft 2.9°C/W/3in

3



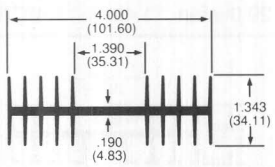
60670* 23.0 in²/in 1.8lb/ft 3.0°C/W/3in

4



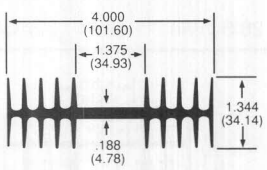
61245 30.5 in²/in 1.8lb/ft 2.3°C/W/3in

5



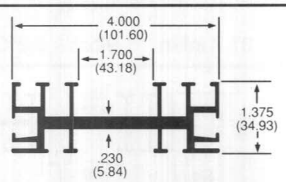
61940 32.0 in²/in 1.7lb/ft 2.2°C/W/3in

6



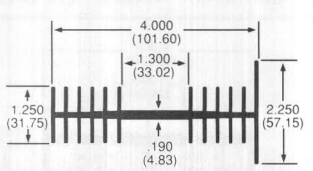
64910* 31.5 in²/in 1.7lb/ft 2.2°C/W/3in

7



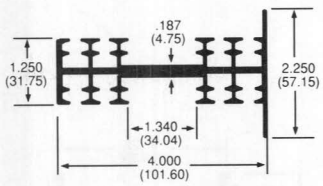
60800 28.5 in²/in 1.9lb/ft 2.4°C/W/3in

8



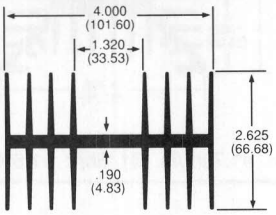
60830* 27.5 in²/in 1.6lb/ft 2.5°C/W/3in

9



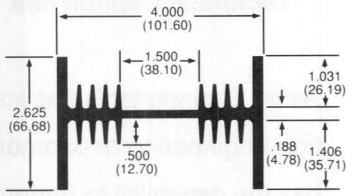
60360 27.0 in²/in 1.8lb/ft 2.6°C/W/3in

10



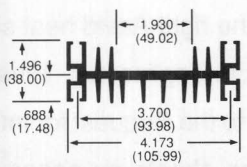
60755 46.8 in²/in 2.8lb/ft 1.5°C/W/3in

11



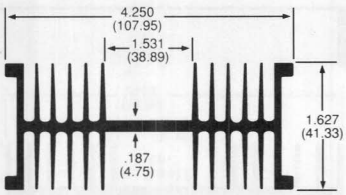
62595* 34.1 in²/in 2.7lb/ft 2.1°C/W/3in

12



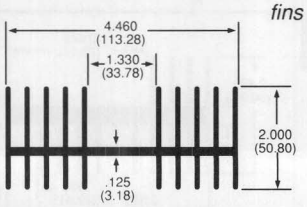
62425* 33.1 in²/in 2.1lb/ft 2.1°C/W/3in

13



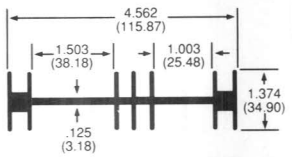
60345* 36.8 in²/in 2.3lb/ft 1.9°C/W/3in

14 *Serrated fins*



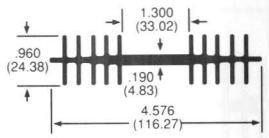
60635 43.5 in²/in 2.3lb/ft 1.6°C/W/3in

15



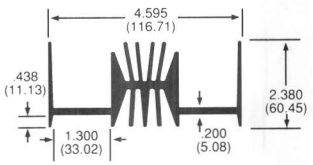
61210* 27.0 in²/in 1.9lb/ft 2.6°C/W/3in

16 *Serrated fins*



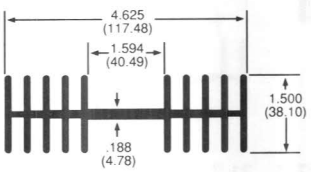
62015* 25.9 in²/in 1.7lb/ft 2.7°C/W/3in

17



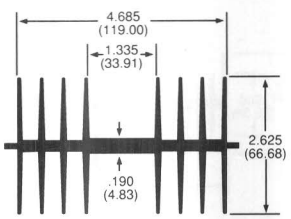
60620* 39.0 in²/in 3.8lb/ft 1.8°C/W/3in

18



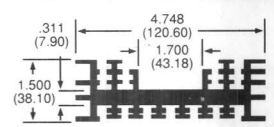
60280 35.4 in²/in 2.4lb/ft 2.0°C/W/3in

19



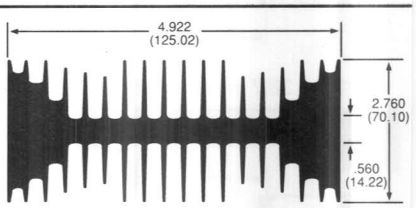
60295* 49.2 in²/in 2.4lb/ft 1.4°C/W/3in

20



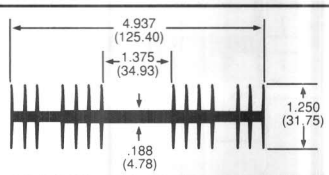
63180 44.4 in²/in 2.7lb/ft 1.6°C/W/3in

21



64840 64.8 in²/in 8.6lb/ft 1.1°C/W/3in

22



60220* 34.8 in²/in 1.9lb/ft 2.0°C/W/3in

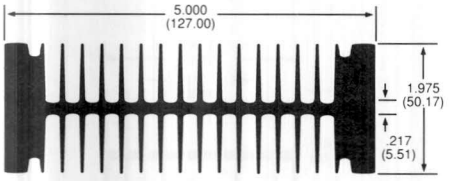
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

Note: The profiles are not to scale in relation to each other.

Key:

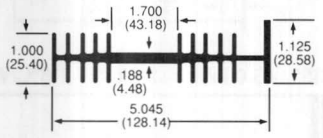
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



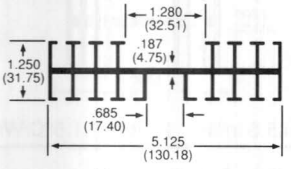
63235* 64.4 in²/in 6.3lb/ft 1.1°C/W/3in

2



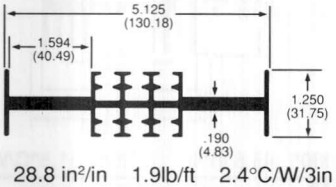
61380* 30.0 in²/in 2.0lb/ft 2.3°C/W/3in

3



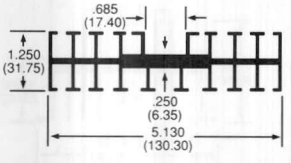
65070* 39.0 in²/in 1.6lb/ft 1.8°C/W/3in

4



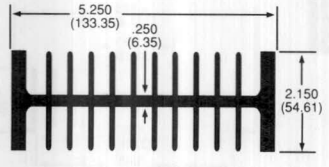
60100* 28.8 in²/in 1.9lb/ft 2.4°C/W/3in

5



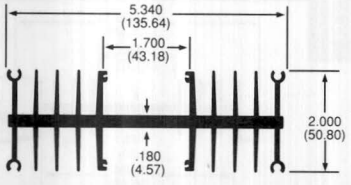
64375* 20.2 in²/in 2.2lb/ft 3.5°C/W/3in

6



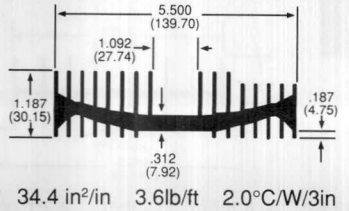
63550* 56.6 in²/in 3.4lb/ft 1.2°C/W/3in

7



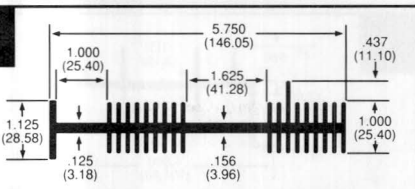
60390 51.7 in²/in 3.3lb/ft 1.4°C/W/3in

8



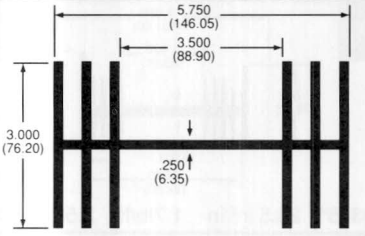
67090* 34.4 in²/in 3.6lb/ft 2.0°C/W/3in

9



61005 44.9 in²/in 2.4lb/ft 1.7°C/W/3in

10

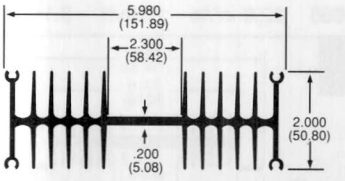


60145* 45.0 in²/in 4.2lb/ft 1.6°C/W/3in

Fabrication Capabilities

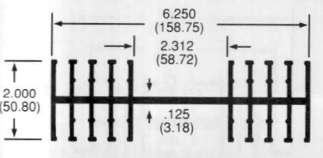
Aavid has extensive manufacturing capabilities for the complete fabrication of heat sinks from extrusions. The Aavid plant is equipped with high speed saws, a battery of CNC machining centers, and an automated anodizing line - incorporating the latest technology available in the world.

11



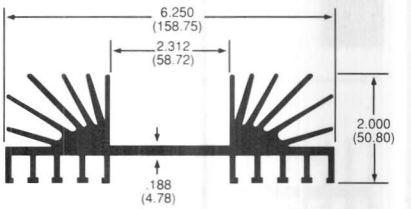
67295 55.0 in²/in 3.4lb/ft 1.3°C/W/3in

12



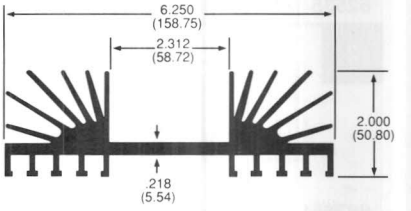
60315 54.6 in²/in 3.3lb/ft 1.3°C/W/3in

13



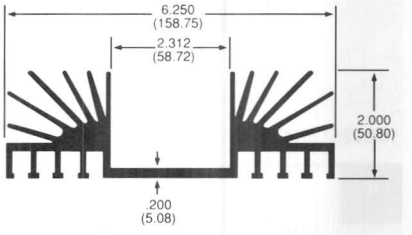
60730 52.4 in²/in 4.1lb/ft 1.3°C/W/3in

14



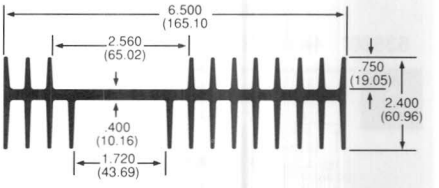
61705 50.6 in²/in 4.5lb/ft 1.4°C/W/3in

15



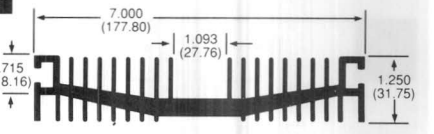
61310 52.1 in²/in 4.3lb/ft 1.3°C/W/3in

16



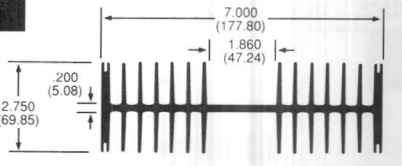
61970* 56.6 in²/in 5.6lb/ft 1.2°C/W/3in

17



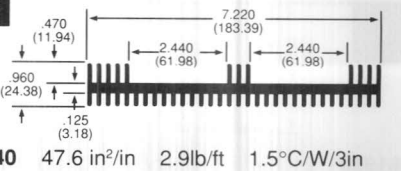
67175* 50.3 in²/in 4.6lb/ft 1.4°C/W/3in

18



64075 82.0 in²/in 6.3lb/ft 0.9°C/W/3in

19



66340 47.6 in²/in 2.9lb/ft 1.5°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

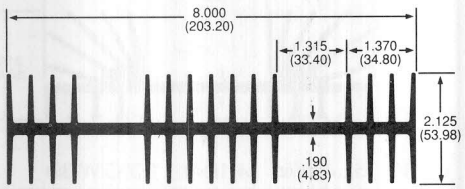
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

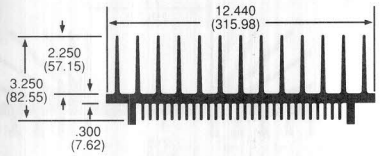
Note: The profiles are not to scale in relation to each other.

1



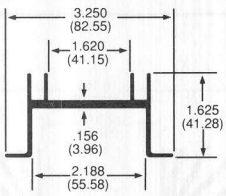
62535 74.4 in^2/in 4.7lb/ft 1.0°C/W/3in

2



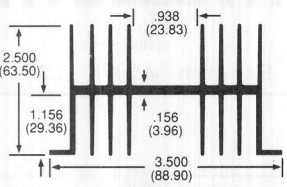
66765* 122.8 in^2/in 12.1lb/ft 0.6°C/W/3in

3



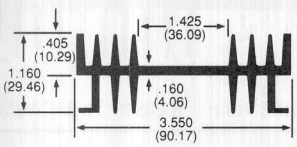
61125* 14.7 in^2/in 0.9lb/ft 4.8°C/W/3in

4



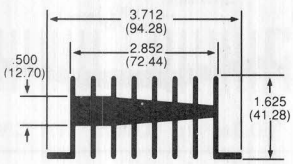
63590* 44.8 in^2/in 1.5lb/ft 1.6°C/W/3in

5



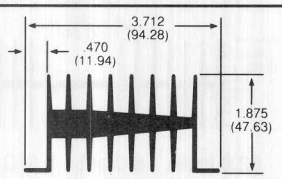
63585* 22.0 in^2/in 1.4lb/ft 3.2°C/W/3in

6



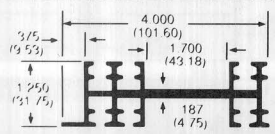
62205 18.4 in^2/in 2.5lb/ft 3.8°C/W/3in

7



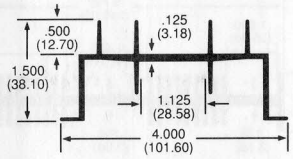
61660 31.9 in^2/in 2.6lb/ft 2.1°C/W/3in

8



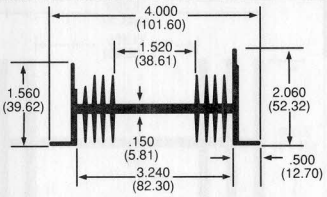
61950* 21.7 in^2/in 1.8lb/ft 3.2°C/W/3in

9



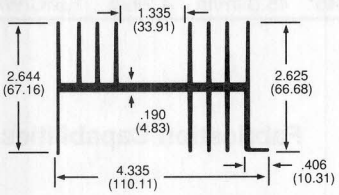
61720* 18.0 in^2/in 0.8lb/ft 3.9°C/W/3in

10



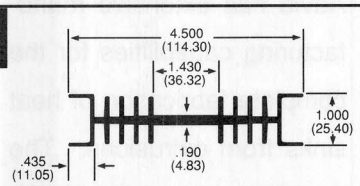
60355* 28.5 in^2/in 1.7lb/ft 2.5°C/W/3in

11



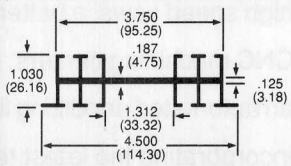
60275* 40.4 in^2/in 2.1lb/ft 1.7°C/W/3in

12 †



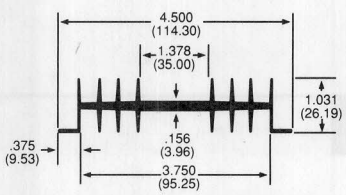
60580 26.5 in^2/in 1.5lb/ft 2.6°C/W/3in

13



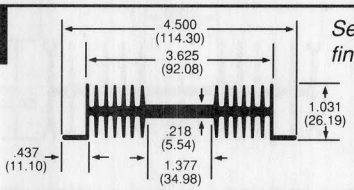
64790* 24.2 in^2/in 1.2lb/ft 2.9°C/W/3in

14



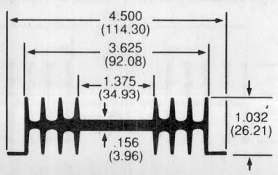
60085 22.6 in^2/in 1.3lb/ft 3.1°C/W/3in

15 *Serrated fins*



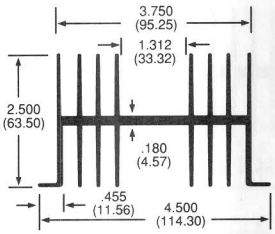
60135* 30.8 in^2/in 1.6lb/ft 2.3°C/W/3in

16 *Serrated fins*



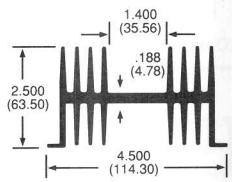
64915* 25.9 in^2/in 1.1lb/ft 2.7°C/W/3in

17



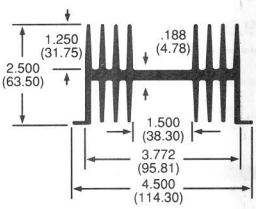
60835* 45.0 in^2/in 2.3lb/ft 1.6°C/W/3in

18



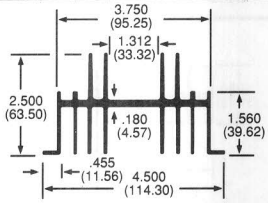
63105* 45.6 in^2/in 2.7lb/ft 1.5°C/W/3in

19



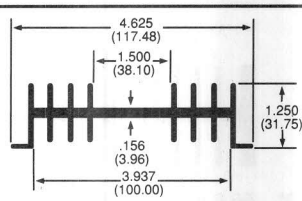
63080* 45.8 in^2/in 2.7lb/ft 1.5°C/W/3in

20



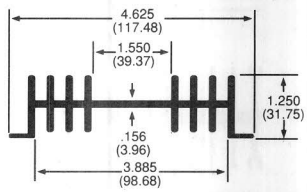
63325 39.2 in^2/in 0.3lb/ft 1.8°C/W/3in

21



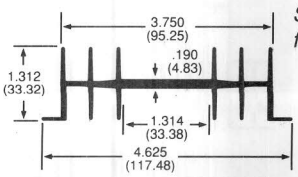
60785* 26.5 in^2/in 1.6lb/ft 2.6°C/W/3in

22



60505 31.0 in^2/in 1.6lb/ft 2.3°C/W/3in

23 *Serrated fins*



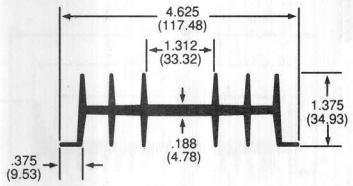
60305* 30.5 in^2/in 1.4lb/ft 2.3°C/W/3in

AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

Note: The profiles are not to scale in relation to each other.

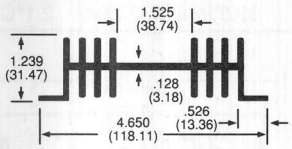
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



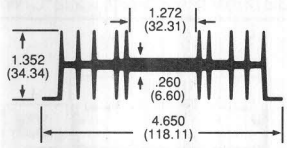
60030* 23.0 in²/in 1.5lb/ft 3.0°C/W/3in

2



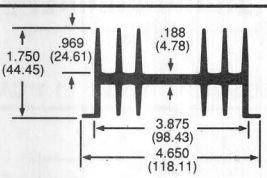
60035 32.6 in²/in 1.5lb/ft 2.1°C/W/3in

3



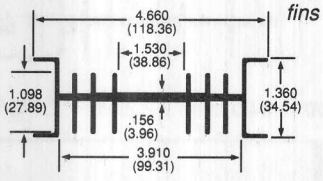
60745 31.7 in²/in 1.9lb/ft 2.2°C/W/3in

4



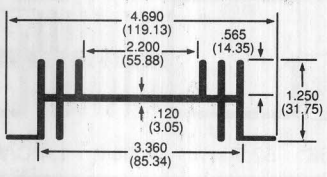
64920* 28.4 in²/in 1.5lb/ft 2.5°C/W/3in

5 *Serrated fins*



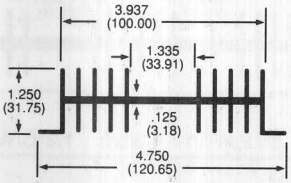
64970* 27.8 in²/in 1.5lb/ft 2.5°C/W/3in

6



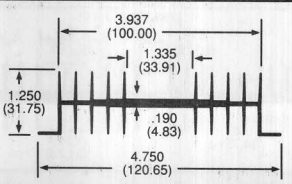
62555* 21.3 in²/in 1.0lb/ft 3.3°C/W/3in

7



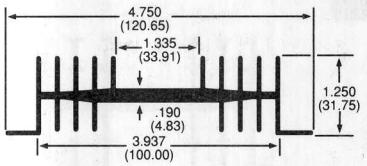
60930* 31.0 in²/in 1.4lb/ft 2.1°C/W/3in

8



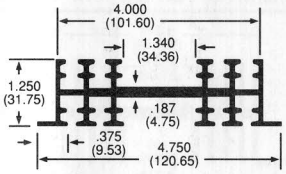
60050 31.7 in²/in 1.4lb/ft 2.2°C/W/3in

9



63895* 30.0 in²/in 1.7lb/ft 2.3°C/W/3in

10

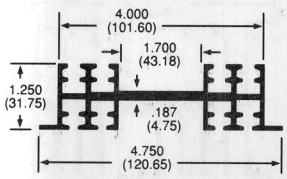


60245 36.0 in²/in 1.9lb/ft 2.0°C/W/3in

Performance vs. Length

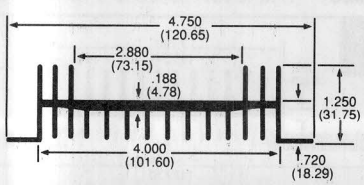
The thermal resistance of a heat sink changes significantly with length. To convert the published natural convection thermal resistance at a 3 inch length to a desired length, see page 5 for a length correction table.

11



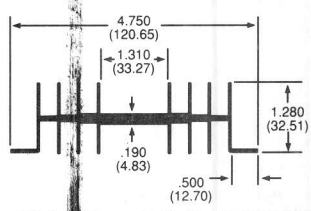
60640 35.3 in²/in 1.7lb/ft 2.0°C/W/3in

12



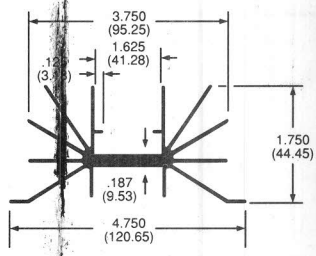
67390* 29.7 in²/in 1.5lb/ft 2.4°C/W/3in

13



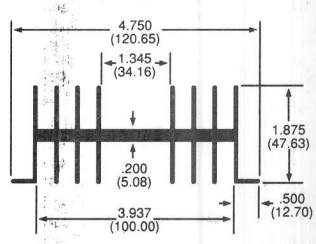
61670* 28.2 in²/in 1.3lb/ft 2.5°C/W/3in

14



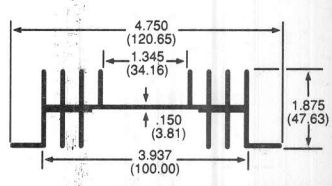
60330* 27.5 in²/in 1.4lb/ft 2.6°C/W/3in

15



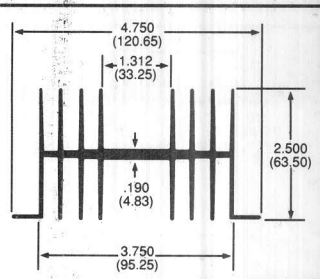
60065 35.2 in²/in 2.4lb/ft 2.0°C/W/3in

16



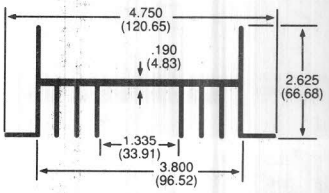
65720 32.4 in²/in 2.0lb/ft 2.2°C/W/3in

17



60290 46.4 in²/in 2.1lb/ft 1.5°C/W/3in

18



64600* 33.3 in²/in 1.2lb/ft 2.1°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

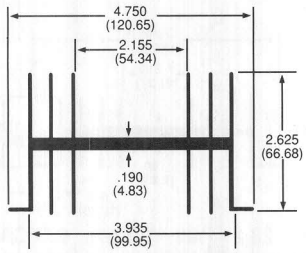
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in²/in	2.54	cm²/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

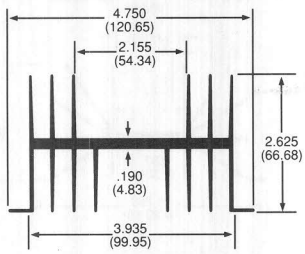
Note: The profiles are not to scale in relation to each other.

1



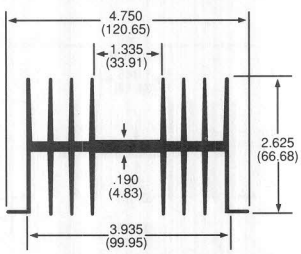
61760 43.9 in²/in 1.9lb/ft 1.6°C/W/3in

2



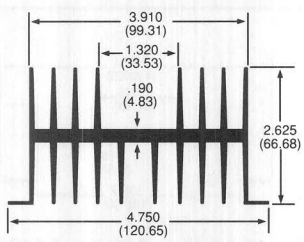
60780 45.4 in²/in 2.3lb/ft 1.5°C/W/3in

3



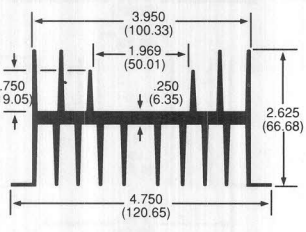
60055 48.1 in²/in 2.5lb/ft 1.5°C/W/3in

4



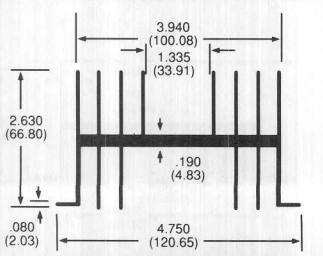
63360* 53.7 in²/in 2.6lb/ft 1.3°C/W/3in

5



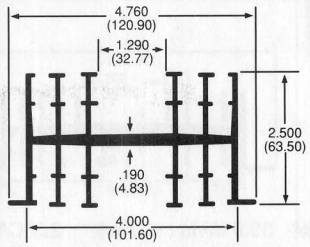
67075 45.4 in²/in 2.8lb/ft 1.5°C/W/3in

6



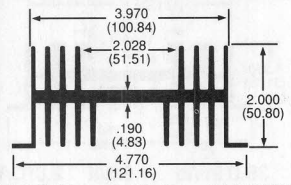
63980* 43.6 in²/in 2.5lb/ft 1.6°C/W/3in

7



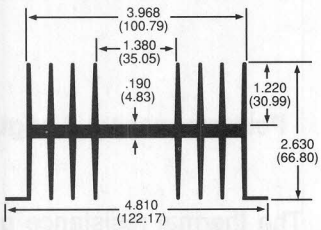
62310* 40.9 in²/in 2.1lb/ft 1.7°C/W/3in

8



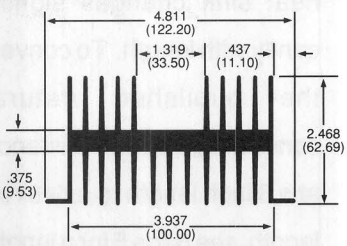
63140* 42.0 in²/in 2.3lb/ft 1.7°C/W/3in

9



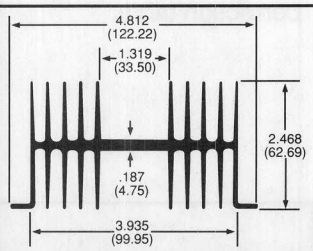
64250* 47.3 in²/in 2.4lb/ft 1.5°C/W/3in

10



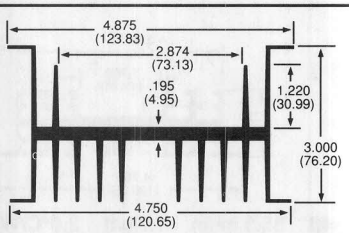
60240* 59.0 in²/in 3.8lb/ft 1.2°C/W/3in

11



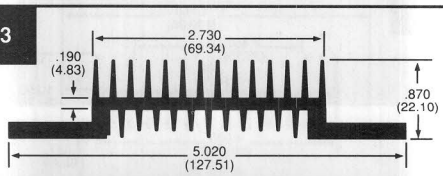
60565 58.3 in²/in 2.4lb/ft 1.2°C/W/3in

12



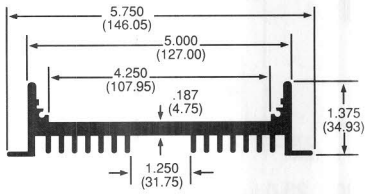
63525* 47.2 in²/in 3.0lb/ft 1.5°C/W/3in

13



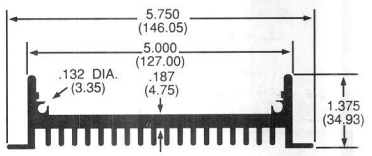
60720 28.0 in²/in 1.9lb/ft 2.5°C/W/3in

14



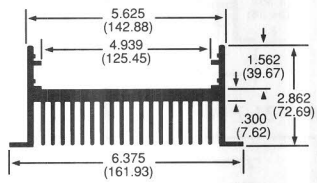
61365 32.8 in²/in 2.2lb/ft 2.1°C/W/3in

15



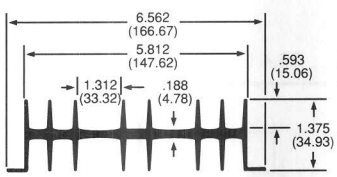
61255* 32.0 in²/in 2.1lb/ft 2.2°C/W/3in

16



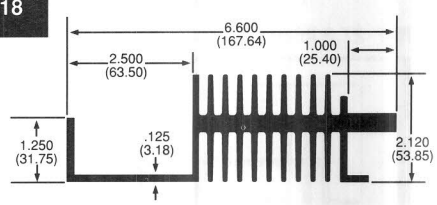
61350* 66.5 in²/in 4.8lb/ft 1.1°C/W/3in

17



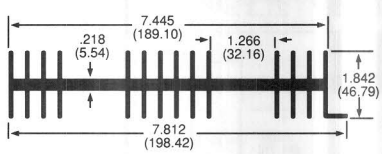
61400* 34.0 in²/in 2.2lb/ft 2.1°C/W/3in

.18



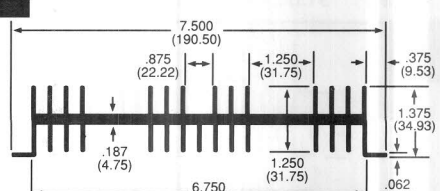
63165* 52.9 in²/in 4.8lb/ft 1.4°C/W/3in

19



61165* 58.2 in²/in 4.3lb/ft 1.2°C/W/3in

20



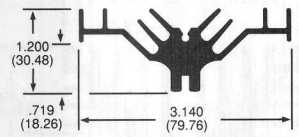
60410* 47.8 in²/in 2.8lb/ft 1.5°C/W/3in

AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

Note: The profiles are not to scale in relation to each other.

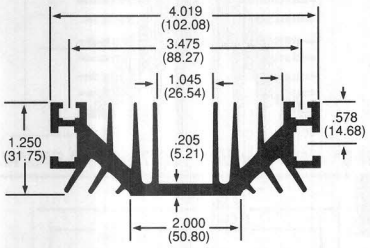
Key:
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



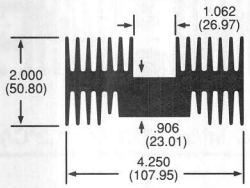
62885 16.0 in²/in 1.0lb/ft 4.2°C/W/3in

2



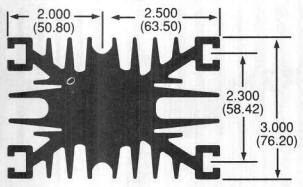
66925* 26.8 in²/in 2.2lb/ft 2.6°C/W/3in

3



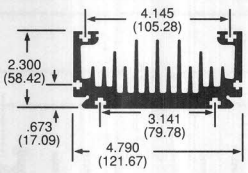
63510* 46.0 in²/in 5.4lb/ft 1.5°C/W/3in

4



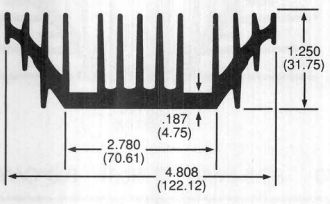
62445 51.2 in²/in 8.3lb/ft 1.4°C/W/3in

5



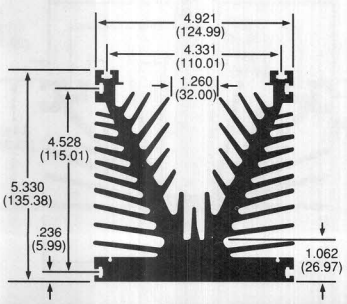
67120* 47.9 in²/in 5.1lb/ft 1.5°C/W/3in

6



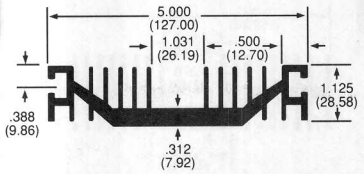
62680* 30.4 in²/in 2.2lb/ft 2.3°C/W/3in

7



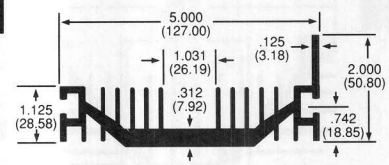
66975* 101.9 in²/in 11.2lb/ft 0.7°C/W/3in

8



60530 33.8 in²/in 2.6lb/ft 2.1°C/W/3in

9

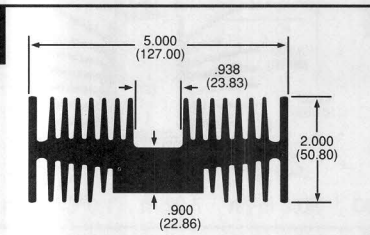


60535* 35.5 in²/in 2.7lb/ft 2.0°C/W/3in

Temperature Rise Factor

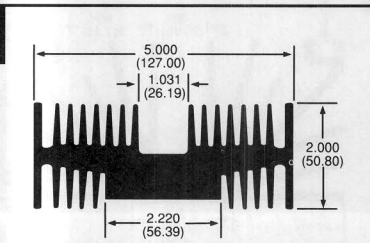
The published thermal resistance assumes a 75° C temperature rise of the heat sink above the ambient temperature. To determine the thermal resistance in natural convection for other temperature rises, see page 4 for a temperature correction table.

10



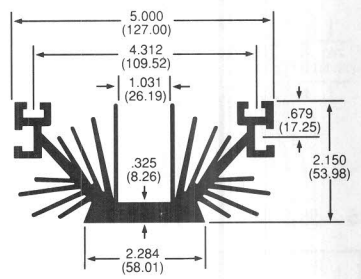
60445* 52.5 in²/in 6.4lb/ft 1.3°C/W/3in

11



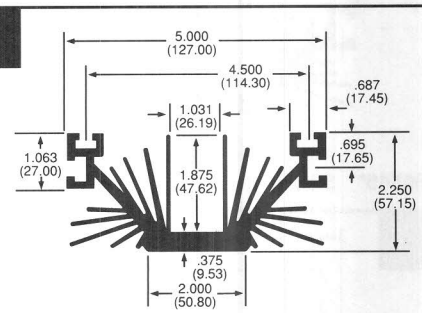
61640 56.8 in²/in 5.9lb/ft 1.2°C/W/3in

12



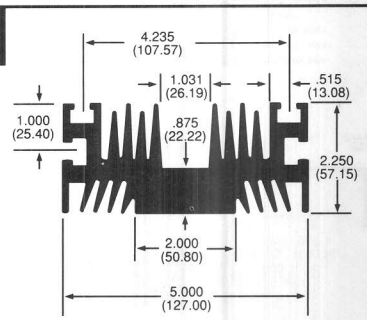
65265 52.7 in²/in 3.8lb/ft 1.3°C/W/3in

13



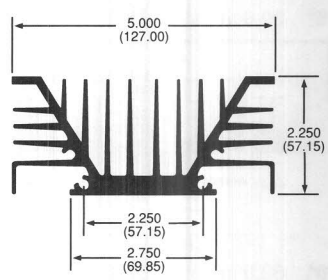
60540 56.0 in²/in 4.3lb/ft 1.2°C/W/3in

14



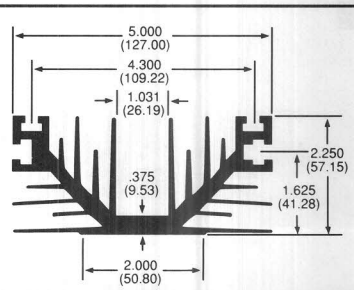
62190 49.1 in²/in 7.1lb/ft 1.4°C/W/3in

15



61965 58.0 in²/in 4.1lb/ft 1.2°C/W/3in

16



67170* 55.4 in²/in 3.7lb/ft 1.3°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

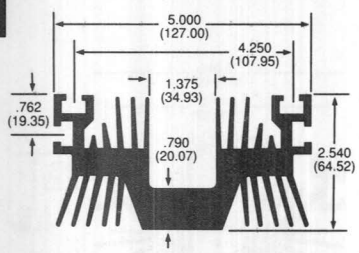
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

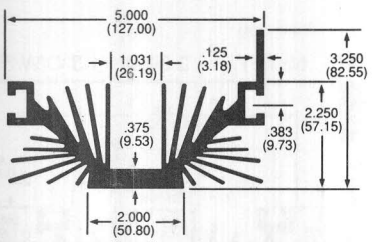
Note: The profiles are not to scale in relation to each other.

1



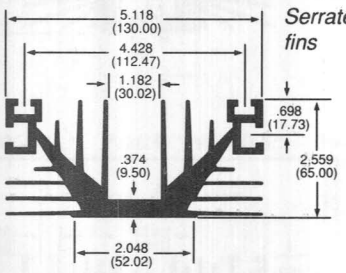
61815 55.6 in^2/in 6.2lb/ft 1.3°C/W/3in

2



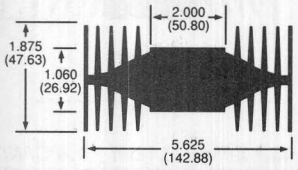
60545* 59.8 in^2/in 4.1lb/ft 1.2°C/W/3in

3 *Serrated fins*



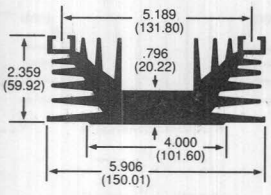
62775* 71.2 in^2/in 5.6lb/ft 25.9°C/W/3in

4



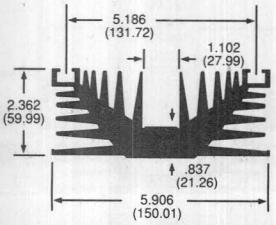
66475* 39.6 in^2/in 6.3lb/ft 1.8°C/W/3in

5 *Serrated fins*



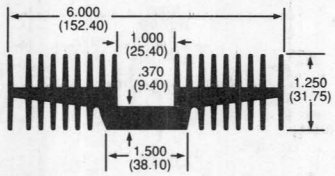
63070* 62.0 in^2/in 7.6lb/ft 1.1°C/W/3in

6 *Serrated fins*



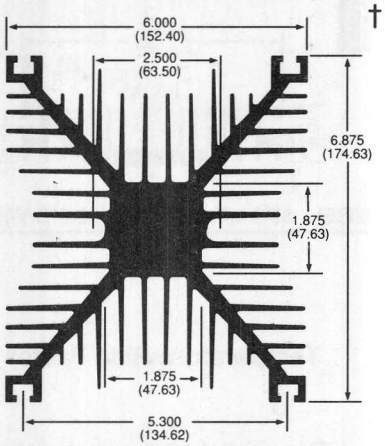
62780* 72.8 in^2/in 8.2lb/ft 1.0°C/W/3in

7



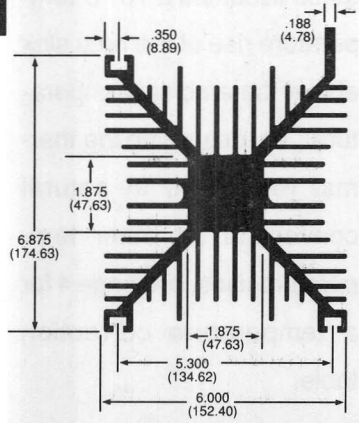
62940 43.5 in^2/in 3.8lb/ft 1.6°C/W/3in

8 †



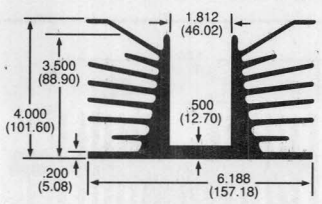
62100 148.6 in^2/in 14.5lb/ft 0.5°C/W/3in

9 †



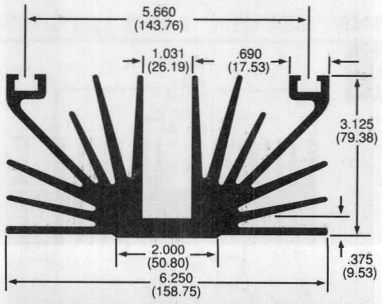
63030* 147.3 in^2/in 14.5lb/ft 0.5°C/W/3in

10



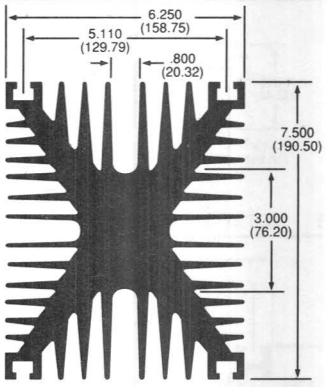
66720 70.2 in^2/in 7.2lb/ft 1.0°C/W/3in

11 †



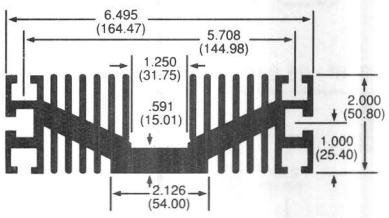
61510 66.9 in^2/in 7.8lb/ft 1.0°C/W/3in

12 †



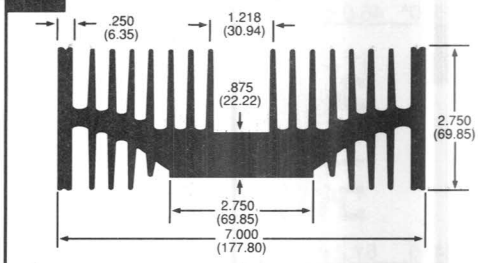
62450* 121.2 in^2/in 32.7lb/ft 0.6°C/W/3in

13



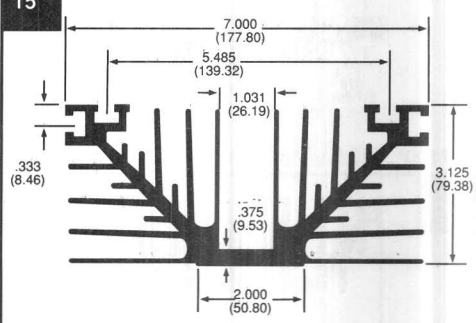
67730* 59.7 in^2/in 7.9lb/ft 1.2°C/W/3in

14 †



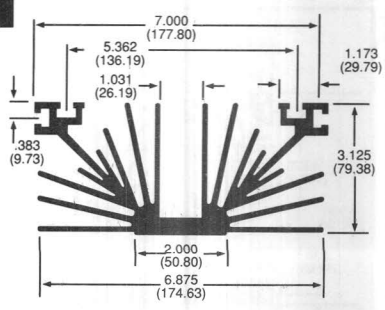
61535 75.2 in^2/in 10.1lb/ft 0.9°C/W/3in

15



61570 87.5 in^2/in 7.4lb/ft 0.8°C/W/3in

16



60655 82.4 in^2/in 7.5lb/ft 0.9°C/W/3in

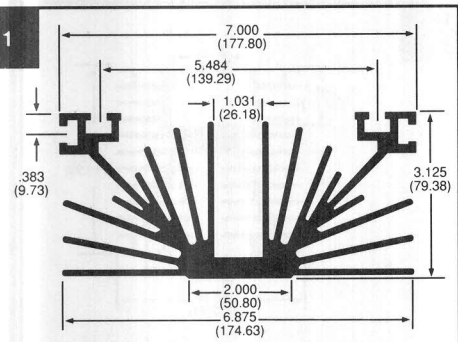
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

Note: The profiles are not to scale in relation to each other.

Key:

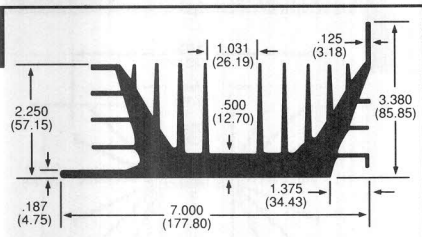
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



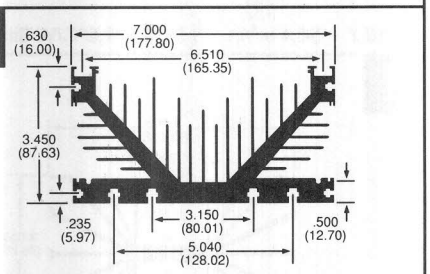
61935* 80.5 in²/in 7.7lb/ft 0.9°C/W/3in

2



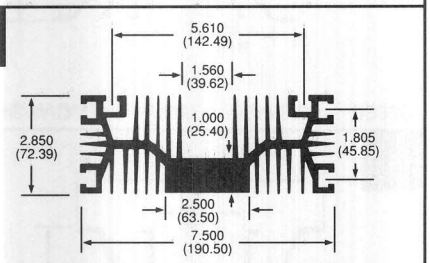
65045* 51.1 in²/in 7.1lb/ft 1.4°C/W/3in

3



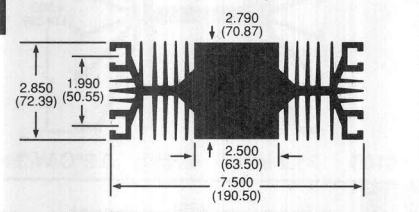
64730 95.2 in²/in 11.0lb/ft 0.7°C/W/3in

4



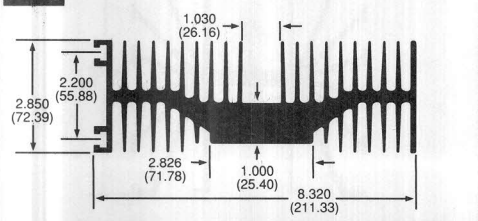
63885 99.2 in²/in 10.4lb/ft 0.7°C/W/3in

5



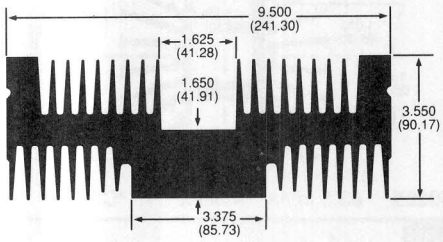
63880 88.8 in²/in 15.4lb/ft 0.8°C/W/3in

6 †



62570* 105.7 in²/in 10.8lb/ft 0.7°C/W/3in

7 †

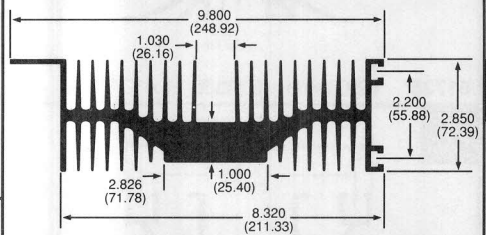


62340 106.7 in²/in 22.2lb/ft 0.7°C/W/3in

Optimization

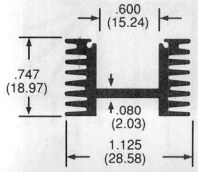
Optimization in either forced or natural convection can result in cost and size reduction of the heat sink. In forced convection, optimization can reduce the size of the fan or blower. See page 4 for more information concerning optimization.

8



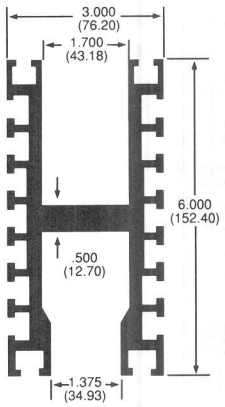
61540 108.4 in²/in 11.1lb/ft 0.7°C/W/3in

9



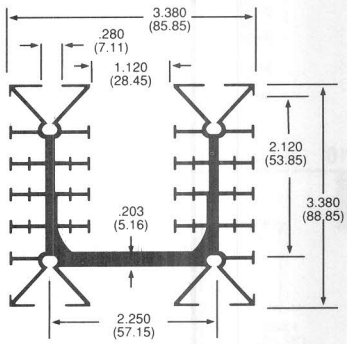
63335* 9.6 in²/in 0.4lb/ft 7.3°C/W/3in

10 †



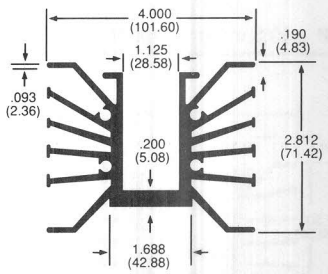
61930 46.5 in²/in 6.0lb/ft 1.5°C/W/3in

11



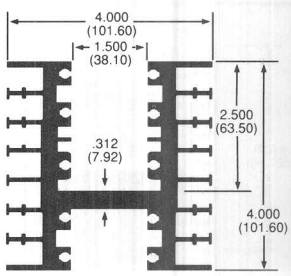
61240* 53.6 in²/in 2.7lb/ft 1.3°C/W/3in

12



62070* 48.4 in²/in 3.7lb/ft 1.4°C/W/3in

13



61270 60.7 in²/in 5.2lb/ft 1.2°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

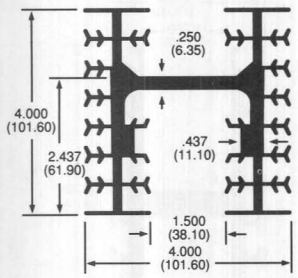
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

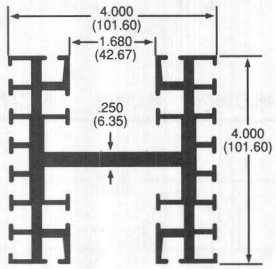
Note: The profiles are not to scale in relation to each other.

1



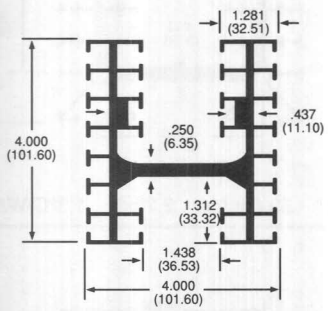
60320 75.5 in^2/in 4.9lb/ft 0.9°C/W/3in

2



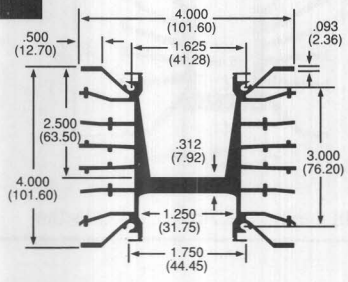
60810 63.0 in^2/in 4.5lb/ft 1.1°C/W/3in

3



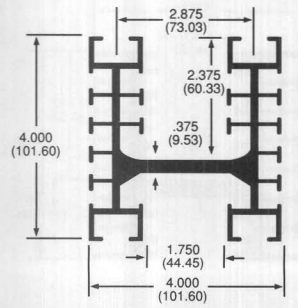
64265* 60.5 in^2/in 4.6lb/ft 1.2°C/W/3in

4 *Serrated fins*



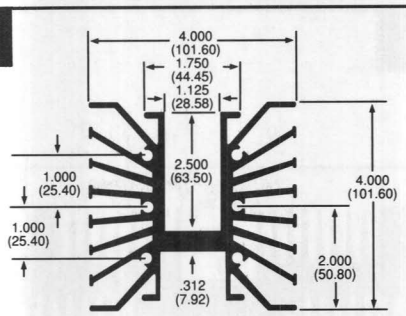
64940* 81.8 in^2/in 4.3lb/ft 0.9°C/W/3in

5



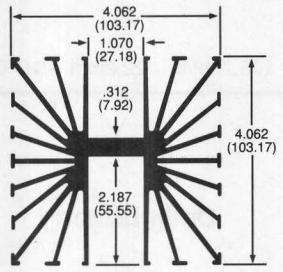
64975* 51.0 in^2/in 4.6lb/ft 1.4°C/W/3in

6



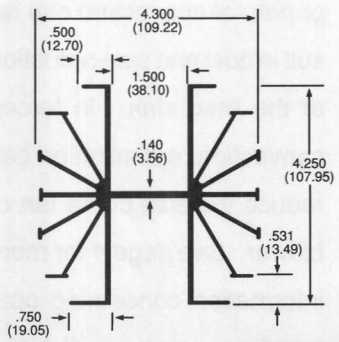
60255 63.5 in^2/in 4.8lb/ft 1.1°C/W/3in

7



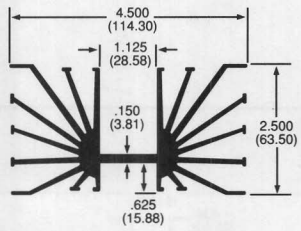
60200* 76.0 in^2/in 4.4lb/ft 0.9°C/W/3in

8



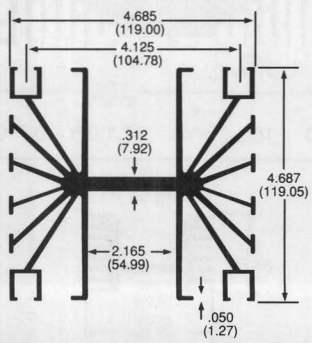
61175 55.8 in^2/in 3.0lb/ft 1.0°C/W/3in

9



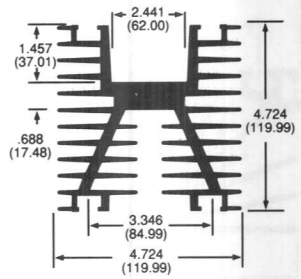
61735* 52.0 in^2/in 2.8lb/ft 1.4°C/W/3in

10



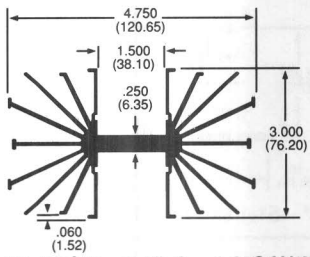
66740* 71.5 in^2/in 4.4lb/ft 1.0°C/W/3in

11



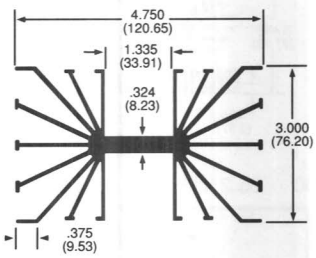
62360* 81.1 in^2/in 7.5lb/ft 0.9°C/W/3in

12



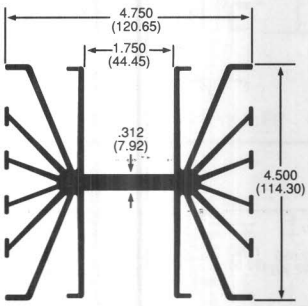
63150* 54.4 in^2/in 3.5lb/ft 1.3°C/W/3in

13



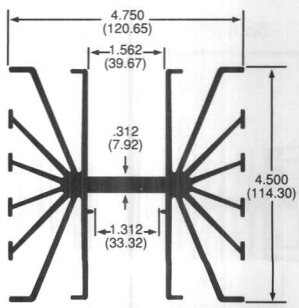
60650 62.3 in^2/in 3.0lb/ft 1.1°C/W/3in

14



60105 71.2 in^2/in 4.3lb/ft 0.9°C/W/3in

15



60060 71.2 in^2/in 4.3lb/ft 1.0°C/W/3in

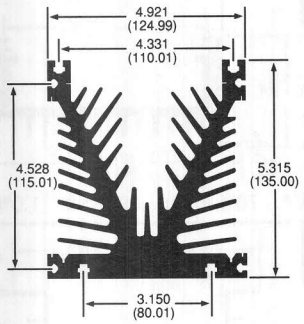
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

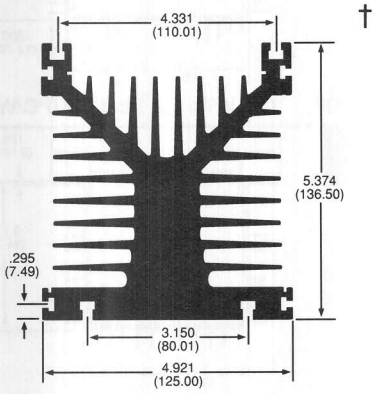
Key:
in²/in - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



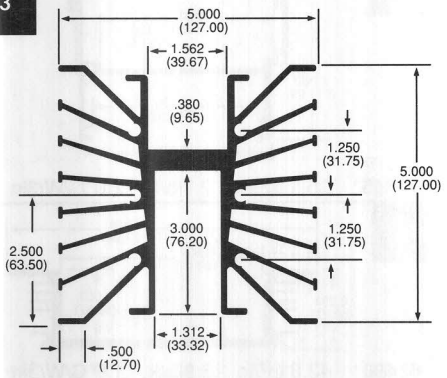
62905 91.2 in²/in 11.1lb/ft 0.8°C/W/3in

2 †



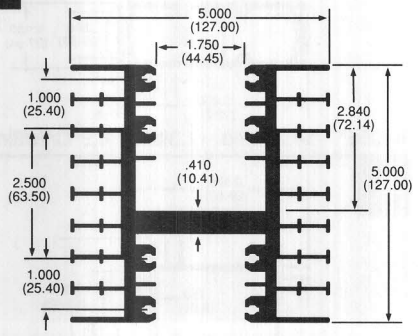
62375 91.3 in²/in 12.8lb/ft 0.8°C/W/3in

3



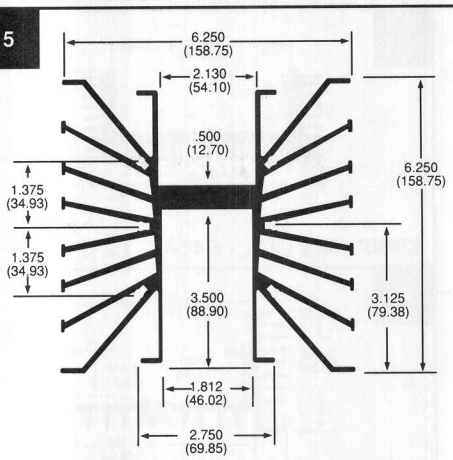
60260 81.9 in²/in 5.6lb/ft 0.9°C/W/3in

4



61235 71.0 in²/in 7.3lb/ft 1.0°C/W/3in

5

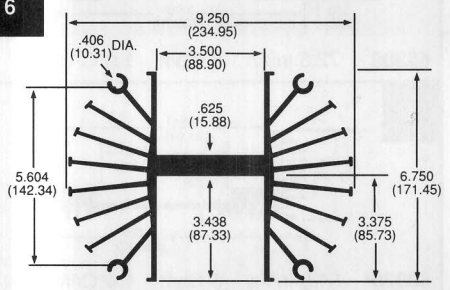


60265 105.7 in²/in 7.8lb/ft 0.7°C/W/3in

Electronic Enclosures

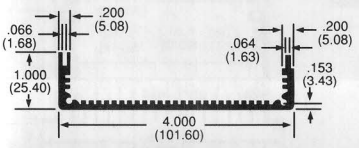
Multi-function extruded electronic enclosures improve product appearance, reduce packaging costs, and extend electronic system life. For more information, contact Aavid Engineering for the Technical Design Guide for Electronic Enclosures.

6



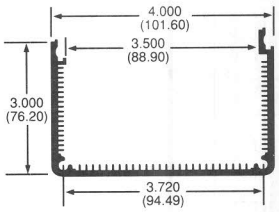
61015 119.0 in²/in 10.9lb/ft 0.6°C/W/3in

7



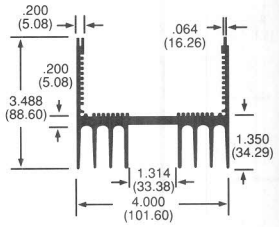
62415* 18.6 in²/in 1.0lb/ft 3.8°C/W/3in

8



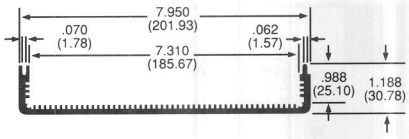
64740* 32.8 in²/in 1.5lb/ft 2.1°C/W/3in

9



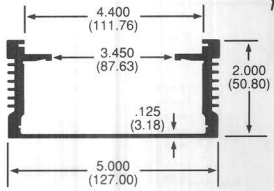
62420* 45.9 in²/in 2.8lb/ft 1.5°C/W/3in

10



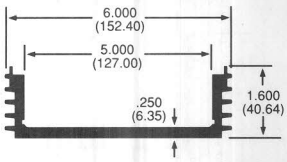
67455* 33.2 in²/in 1.8lb/ft 2.1°C/W/3in

11 *Serrated fins*



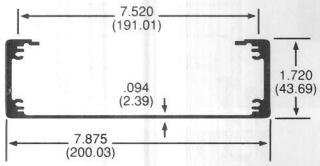
67720* 25.4 in²/in 2.8lb/ft 2.8°C/W/3in

12



63705* 21.8 in²/in 2.8lb/ft 3.2°C/W/3in

13



67280* 28.0 in²/in 1.7lb/ft 2.5°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

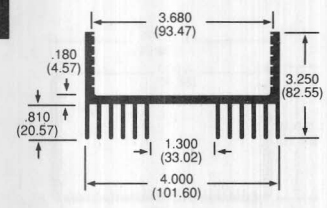
* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

EXTRUSIONS

Conversion Chart		
Given:	Multiply by:	To Obtain:
in^2/in	2.54	cm^2/cm
lb/ft	1.5	gm/mm
°C/W/3"	1.02	°C/W/75mm

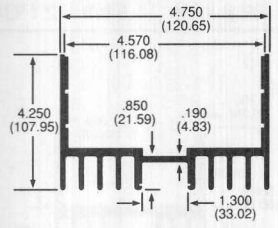
Note: The profiles are not to scale in relation to each other.

1



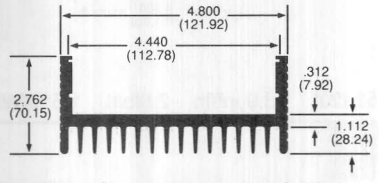
67530* 37.7 in²/in 3.2lb/ft 1.9°C/W/3in

2



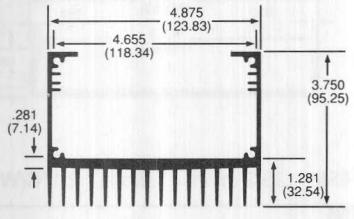
67525* 41.2 in²/in 3.7lb/ft 1.7°C/W/3in

3



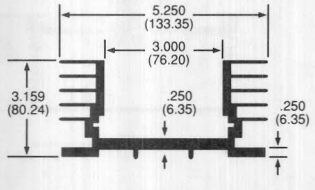
63940* 45.8 in²/in 4.3lb/ft 1.5°C/W/3in

4



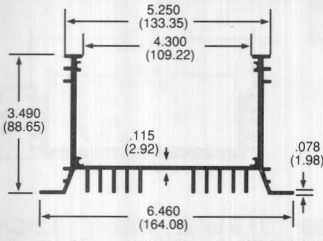
60915* 58.0 in²/in 3.8lb/ft 1.2°C/W/3in

5



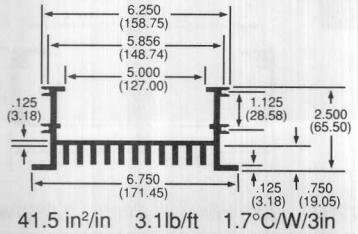
64160 41.4 in²/in 3.8lb/ft 1.7°C/W/3in

6



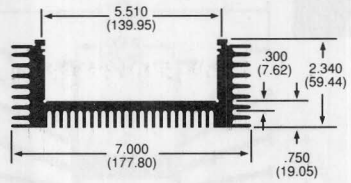
62945 61.7 in²/in 4.8lb/ft 1.1°C/W/3in

7



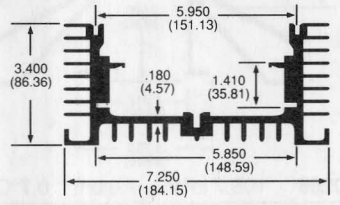
62590 41.5 in²/in 3.1lb/ft 1.7°C/W/3in

8



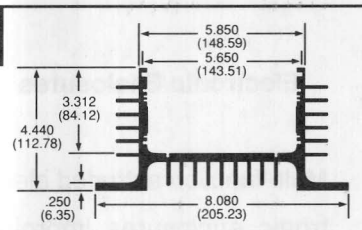
63950* 58.2 in²/in 5.4lb/ft 1.2°C/W/3in

9



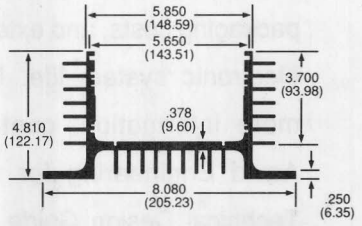
66665* 56.3 in²/in 5.7lb/ft 1.2°C/W/3in

10



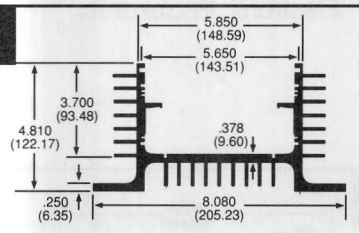
65130 66.3 in²/in 6.2lb/ft 1.1°C/W/3in

11



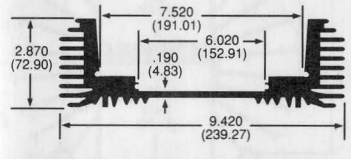
65590 70.8 in²/in 6.6lb/ft 1.0°C/W/3in

12



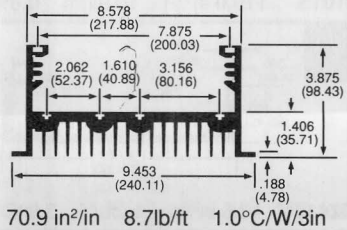
65300 72.5 in²/in 6.8lb/ft 1.0°C/W/3in

13



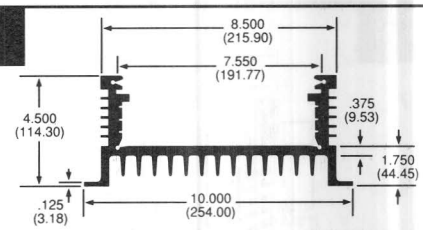
68020* 51.5 in²/in 6.1lb/ft 1.4°C/W/3in

14



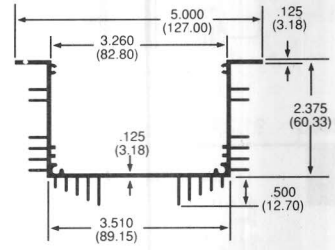
65145 70.9 in²/in 8.7lb/ft 1.0°C/W/3in

15



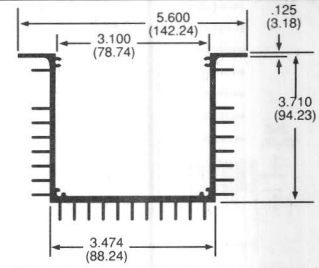
63405* 70.1 in²/in 09.6lb/ft 1.0°C/W/3in

16



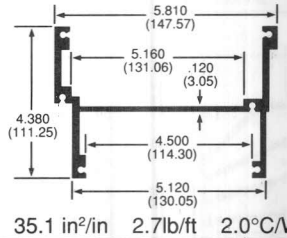
65200 35.2 in²/in 2.1lb/ft 2.0°C/W/3in

17



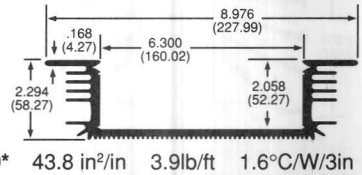
62605* 53.1 in²/in 4.1lb/ft 1.3°C/W/3in

18



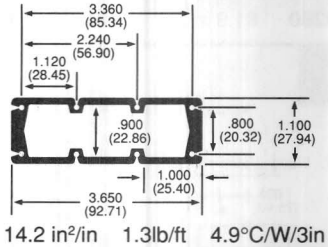
66845* 35.1 in²/in 2.7lb/ft 2.0°C/W/3in

19



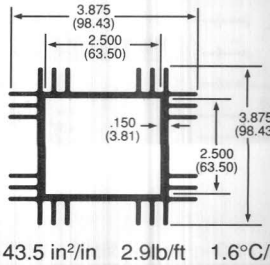
63490* 43.8 in²/in 3.9lb/ft 1.6°C/W/3in

20



64055* 14.2 in²/in 1.3lb/ft 4.9°C/W/3in

21



60115* 43.5 in²/in 2.9lb/ft 1.6°C/W/3in

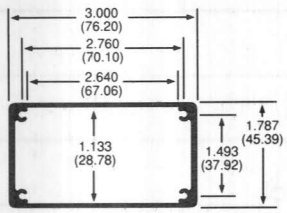
AAVID ENGINEERING, INC. (EAST) One Kool Path, P.O. Box 400, Laconia, NH 03247-0400 TEL 603-528-3400 FAX 603-528-1478
AAVID ENGINEERING, INC. (WEST) 3030 Kilson Drive, Santa Ana, CA 92707-4203 TEL 714-556-2665 FAX 714-556-5140

EXTRUSIONS

Note: The profiles are not to scale in relation to each other.

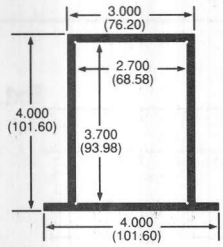
Key: **in²/in** - Surface area per inch of length
lb/ft - Weight per foot in pounds
°C/W/L" - Thermal resistance (est.) in degrees C per watt per lengh, under natural convection, for black anodized heat sinks.

1



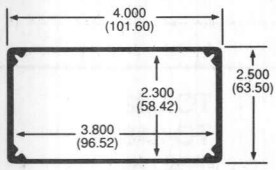
66045* 20.0 in²/in 0.7lb/ft 3.5°C/W/3in

2



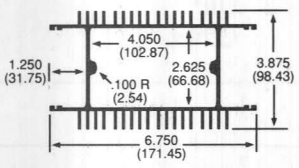
67475* 29.4 in²/in 2.5lb/ft 2.4°C/W/3in

3



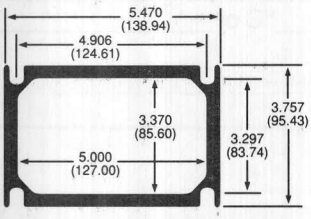
64460* 25.3 in²/in 1.5lb/ft 2.8°C/W/3in

4



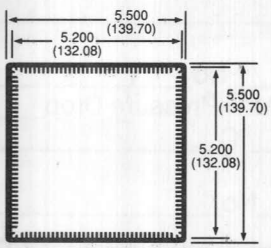
61250* 74.5 in²/in 3.8lb/ft 0.9°C/W/3in

5



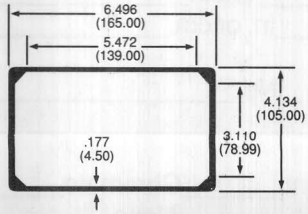
65775 20.9 in²/in 4.4lb/ft 3.3°C/W/3in

6



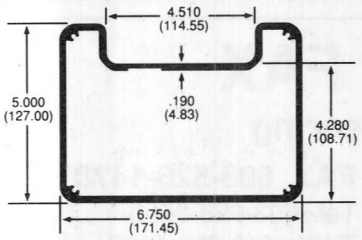
65910* 85.5 in²/in 5.4lb/ft 0.8°C/W/3in

7



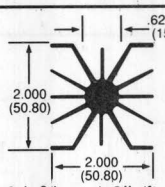
67675* 40.0 in²/in 4.6lb/ft 1.8°C/W/3in

8



68080* 48.0 in²/in 5.3lb/ft 1.5°C/W/3in

9

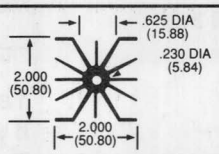


60045* 23.9 in²/in 1.0lb/ft 2.9°C/W/3in

Electronic Enclosures

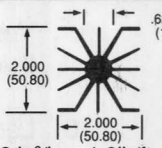
Multi-function extruded electronic enclosures improve product appearance, reduce packaging costs, and extend electronic system life. For more information, contact Aavid Engineering for the Technical Design Guide for Electronic Enclosures.

10



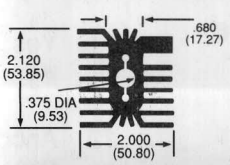
65930 23.6 in²/in 0.9lb/ft 3.0°C/W/3in

11



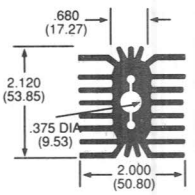
64885* 29.9 in²/in 1.0lb/ft 2.3°C/W/3in

12



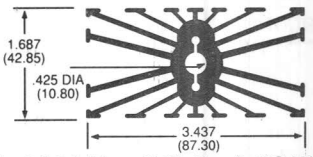
61960* 10.7 in²/in 0.6lb/ft 6.5°C/W/3in

13 *Serrated fins*



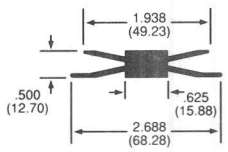
61655 32.4 in²/in 2.3lb/ft 2.2°C/W/3in

14



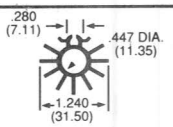
60385* 34.0 in²/in 2.3lb/ft 2.1°C/W/3in

15



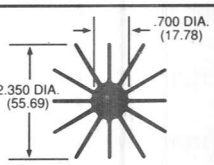
64930 8.9 in²/in 0.7lb/ft 7.9°C/W/3in

16



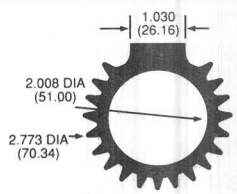
67670* 10.2 in²/in 0.4lb/ft 6.9°C/W/3in

17



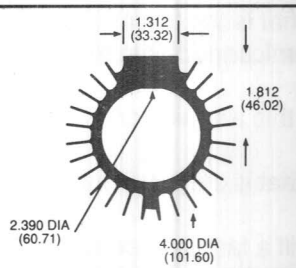
61925* 22.8 in²/in 1.2lb/ft 3.1°C/W/3in

18



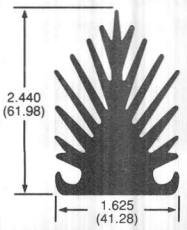
64505* 17.1 in²/in 2.1lb/ft 4.1°C/W/3in

19



67550* 44.3 in²/in 3.7lb/ft 1.6°C/W/3in

20



62065* 22.0 in²/in 2.3lb/ft 3.2°C/W/3in

Standard commercial extrusion tolerances apply (see inside front cover)
Dimensions in parenthesis are millimeters

* Please consult Aavid's customer service department for availability
† Extrusions not stocked in standard eight foot lengths

Copy this form to FAX your inquiries for fast, accurate applications information.

AAVID INCOMING FAX

Attention Applications Engineering

Date:_____

Time:_____

Page 1 of_____

TO: **AAVID ENGINEERING, INC.**
One Kool Path
P.O. Box 400
Laconia, NH 03247

FAX 603-528-1478
Tel. 603-528-3400
TWX. 510-298-1127

FROM: Company Name

_____

Address

_____

_____

Contact

_____

Tel. (____)_____Ext._____

FAX (____)_____

EAU Quantity _____

Product
or
Project _____

Thermal Management Applications Questions

1. What type of device case is being cooled?
   If DIP, how many pins?_____
   If other, describe._____
2. How many of these devices are to be cooled?
3. How many watts of power must be dissipated from each of these devices and in aggregate?
4. What is the maximum allowable junction temperature of the device? (Source: manufacturer's data sheet).
5. What is the thermal resistance of the semiconductor from junction to case - $Ø_{J-C}$?
   (Source: manufacturer's data sheet).
6. What is the thermal resistance from the case of the semiconductor to the heat sink - $Ø_{C-S}$?
7. Is this a liquid cooled application?
8. What is the maximum ambient air temperature?
9. Will a fan be used to cool this heat sink?
10. Please describe the amount of space which is available for this heat sink.
11. Is electrical isolation required between the device case and the heat sink? At what voltage level?
12. What finish is required on the heat sink?
    Color?_____

1. TO-3 TO-202
   TO-5 TO-218
   TO-8 TO-220
   TO-18 TO-247
   TO-66 DIP
   TO-92 Other
2. _____
3. Each device_____
   Total power_____
4. Temp_____°C or _____°F
5. $Ø_{J-C}$ =_____
6. $Ø_{C-A}$ =_____OR
   Mounting interface method and material_____
   _____
7. Yes_____No_____
   If yes, GPM_____ Max Pressure Drop_____
8. Temp_____°C_____°F
9. Yes_____No_____
   If yes, velocity_____(LFM)
10. Length_____Width_____
    Height_____in. or cm._____
11. Yes_____No_____
    If yes, voltage level_____
12. Anodize_____Paint_____Chromate_____
    Special_____None_____

Copy this form to FAX your inquiries for fast, accurate applications information.

REQUEST FOR INFORMATION

FROM: Company Name _____

Product or Project _____

PROGRAM INFORMATION

Program name/application: _____

Timing:

Samples needed by: _____

Prototype completion target date: _____

Pre-production target date: _____

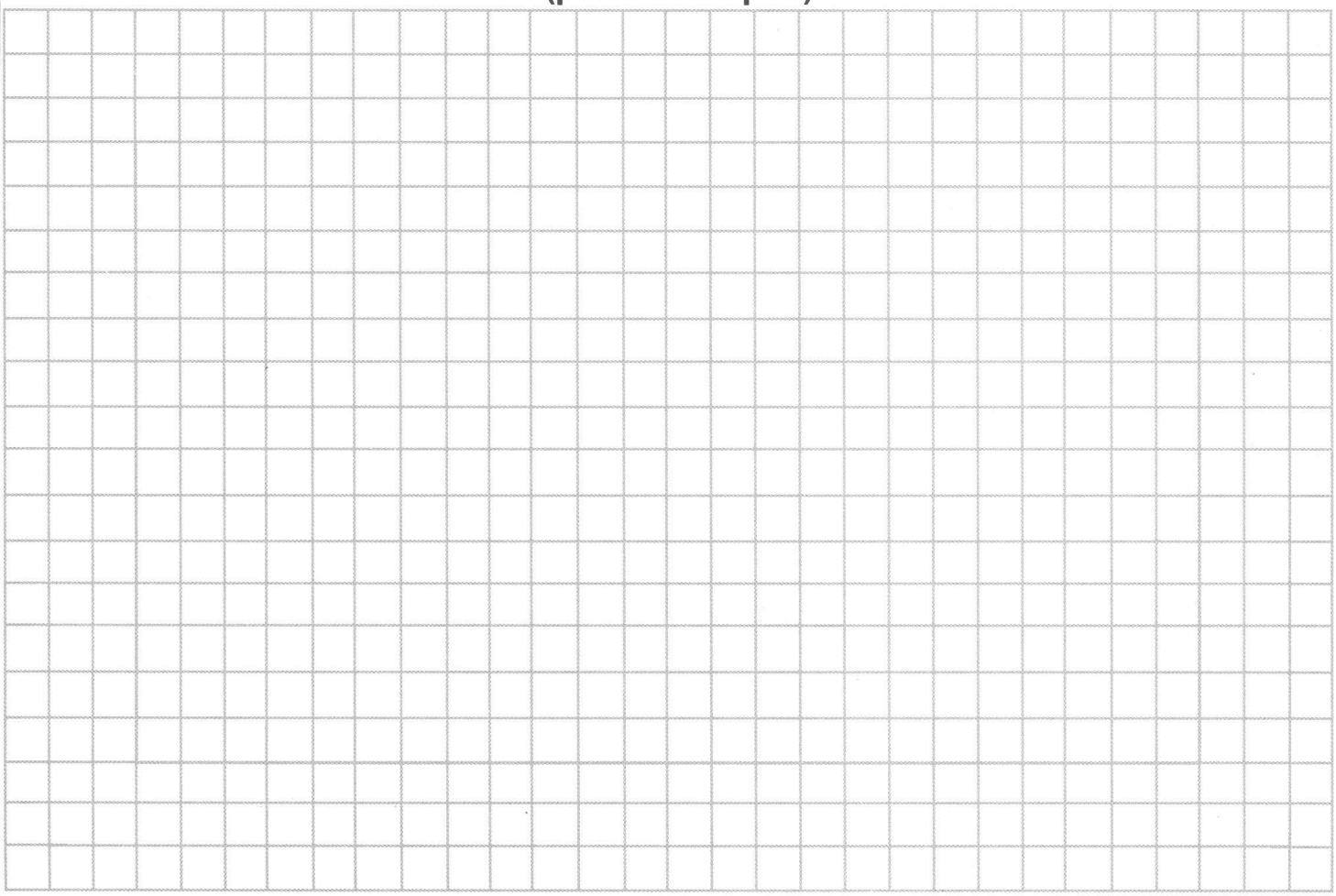
Production target date: _____

Rate of usage: _____

Estimated Annual Usage (EAU) _____

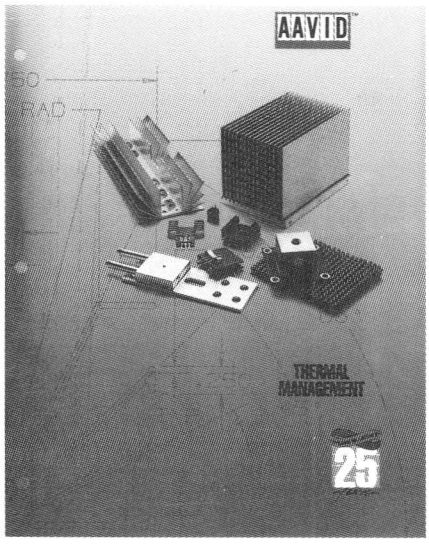
Estimated program life expectancy: _____

APPLICATION SKETCH
(please use pen)



AAVID FAX 603-528-1478

World's largest selection of extruded and stamped heat sinks and other THERMAL MANAGEMENT SOLUTIONS



112-PAGE FULL LINE CATALOG

Design and technical capabilities

Aavid can apply any thermal management discipline to meet your design requirements. No one else has our depth of experience in providing innovative, cost-effective solutions to complex thermal management problems. Our extensive thermal and mechanical CAD abilities are available to help satisfy your specific needs. Ask for application support.

Hundreds of standard heat sinks for PCBs

- For TO-3, TO-8, TO-18, TO-66, TO-92, TO-126, TO-127, TO-202, TO-218, TO-220, TO-247, TO-251 devices, etc.
- For pin grid array (PGA) packages: Intel 80486, Motorola 68040, etc.
- For leadless chip carrier sockets.
- For DIPs (plastic and ceramic), SIPs, and multiwatts.

Labor-saving options

- **New Shur-Lock™ tabs** ensure stability during wave soldering.
- **Spring clips** for mounting plastic power devices to heat sinks without bolts.
- **Interface pads,** grease free.
- **Tabs and standoffs.** Hot tin solder dipped for mounting heat sinks to PCBs.

Over 3000 standard extrusion profiles

Aavid offers the most complete selection of extruded heat sinks in the world. Some of the most unusual and complex extruded heat sinks are available. They are designed to cool all kinds of semiconductors—from power transistors to high-current SCRs, rectifiers, solid state relays and power modules.

Standard fabricated extrusions

Many standard fabricated extrusions are available for cooling press packs (hockey pucks), stud-mount devices, power modules, DC-DC converters, TO-3s and other high-power JEDEC packages.

Forced convection coolers

Optimum thermal performance and low air flow resistance. Maximum heat transfer per ounce at minimum cost.

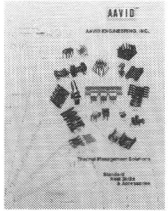
High power cooling products

- **Bonded-fin** heat sinks. 2-4 times more cooling per unit volume, lighter weight, and more design flexibility than extrusions.
- **Folded-fin** heat sinks. Lightest weight product for heavy-duty cooling.
- **Epoxy isolation** systems. Isolated heat spreaders and multi-piece isolation assemblies. High thermal conductivity.
- **Liquid-cooled** cold plates and bus bars. 10-30 times more cooling than air.
- **Clamps** for press pack semiconductors.
- **Heat pipe** assemblies.

Total manufacturing, fabricating, bonding, finishing

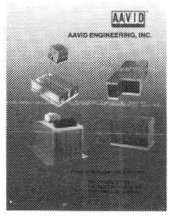
Aavid's capabilities go far beyond the usual stamping, extruding, casting and machining technologies, such as:

- Metallurgical, adhesive and mechanical bonding.
- Surface coating of all kinds.
- EDM machining, lapping, vibratory tumbling.



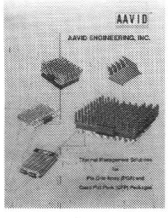
BOARD-LEVEL SELECTOR GUIDE

Board-level heat sinks and other cooling devices. Focuses on quick attachment products that reduce assembly costs.



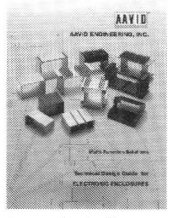
BONDED FIN HEAT SINKS

With standard base plates, you get fast prototypes. 2–4 times more cooling per unit volume, and lighter weight.



HEAT SINKS FOR PGAs

For Intel 80486 and Motorola 68040 PGAs. Mount quickly with PGA-Klips™, double-face tape, socket-based clips, etc.



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